Sabine Grunwald

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https://SGrunwald.org

Curricula Vitae

Education

M.Sc. (Diploma) Environmental Science and Development of Rural Areas. Justus-Liebig University Giessen, Germany (9/1985 to 12/**1992**).

Ph.D. Environmental Science – Justus-Liebig University Giessen, Germany (1/1993 to 12/**1996**).

Ph.D. Integral and Transpersonal Psychology – California Institute of Integral Studies, San Francisco, CA, USA (8/2016 to 5/**2021**).

Academic Work Experience

8/2010 – present: **Professor**
Soil, Water and Ecosystem Sciences Department, University of Florida (UF), Gainesville, Florida, USA
(2001-2011: 60% Research (R) & 40% Teaching (T) appointment; 2012-present: 70% R & 30% T).

Affiliated faculty member with the UF AI & Informatics Institute, UF ICGIS Concentration, UF Florida Climate Institute, UF Water Institute, OneHealth and Center for Spirituality and Health.

4/2015 – present: **Director of the UF Mindfulness Program**
Interdisciplinary Mindfulness Program at the University of Florida that serves students, staff, and faculty members.

1/2013 – 7/2013: **Visiting Professor**
Sabbatical at the Faculty of Agriculture and Environment, University of Sydney, Sydney, Australia.

11/2001 – 5/2011: **Director and Coordinator of Distance Education**
Soil and Water Sciences Department, University of Florida, USA.

8/2006 – 8/2010: **Associate Professor**
Soil and Water Sciences Department, University of Florida, USA.

8/2005 – present: **Affiliate Professor**
Department of Agricultural and Biological Engineering, University of Florida, USA.

3/2003 – present: **Affiliate Professor**
School of Natural Resources and Environment, University of Florida, USA.

8/2001 – 8/2006: **Assistant Professor (tenured 2006)**
Soil and Water Sciences Department, University of Florida, USA.

3/2000 – 7/2001: **Research Scientist and GIS Manager**
Heidelberg College, Ohio, USA.

8/1997 – 3/2000: **Post-Doctoral Associate**
Department of Soil Science, University of Wisconsin-Madison, Wisconsin, USA.

1/1997 – 8/1997: **Post-Doctoral Associate**
Department of Natural Resources, Justus Liebig University Giessen, Germany.

12/1995 – 4/1996: **Visiting Scientist**
National Soil Erosion Research Laboratory, United States Department of Agriculture (USDA) - Agricultural Research Service (ARS), West Lafayette, IN and Purdue University, West Lafayette, Indiana, USA.

1/1995 – 7/1995: **Research Scientist**
Environmental research project (assessment of pesticides in water resources), European Economic Union, Brussels, Belgium.

1/1993 –12/1996: **Graduate Student (Ph.D.)** [honors graduate assistantship program]
Department of Natural Resources, Liebig University Giessen, Germany.

10/1988 – 10/1989: **Graduate Student (M.Sc.)**
Study abroad graduate program, University of Newcastle Upon Tyne, Great Britain.

9/1985 – 12/1992: **Graduate Student (M.Sc.)**
Department of Natural Resources, Liebig University Giessen, Germany.

Certifications

Ontological Coach, Training for ACC Coaching Certification with the International Coaching Federation (ICF), Integral Leadership & Coaching LLC (https://www.integralcoaches.com/) (8/2020 to present). The coaching intensive training entails: Theory and practice of coaching, 1:1 coaching with expert coaches, public coaching, supervised student role coaching, group coaching, mentor coaching, and supervision; and coaching of coachees.

Completed the **Multicultural Mentoring Certificate**, UF Center for Teaching and Excellence (Sept. 14, Oct. 15, and Nov. 15, 2021):

- Bridging differences: Engaging others one relationship at a time
- Equity based mentoring
- Why mentoring matters

Authentic Leadership Graduate Certificate. Naropa University, Boulder, CO, USA (Jan. to May 2015). Completed 6 graduate credits.

Integral Studies Graduate Certificate, Fielding Graduate University, Santa Barbara, CA, USA (July 2012 to July 2013). Completed 3 graduate courses with total of 12 graduate credits:

- OMD 660 Introduction to Integral Studies (Integral Theory by Ken Wilber and applications to different disciplines) – letter grade A
- OMD 661 Advanced Integral Studies (Integral Methodological Pluralism; Integral Spirituality; Integral Psychology) – letter grade A-
- OMD 662 Applied Readings in Integral Studies – letter grade A.

Leadership Training

- Attended the Women's Leadership Conference (March 31 to April 2, 2022).
- Attended training "Becoming Inclusive: A Worthy Pursuit in Leadership" by Dr. Helen Fagen, UF Gainesville, FL (Dec. 2, 2021).
- Participated in the "Inspiring Women Leaders" Conference, Gainesville, FL (March 8-9, 2021).
- Attended "Inclusive Leadership: Cultivating a Thriving Team Culture", University of Florida HR 1-day Training, Gainesville, FL (June 25, 2020).
- Attended Workshop "Leadership Strategies for Success", facilitated by the University of Florida Office of Professional and Workforce Development, Gainesville, FL (April 24, 2020).
- Attended Workshop "Leading and Managing Remotely", part of the LEAD Institute of Food and Agricultural Sciences (IFAS) Network. Teacher: Dr. Matt Sowcik (March 25, 2020).
- Participated in the "Inspiring Women Leaders" Conference, Gainesville, FL (March 8-10, 2020).
- **Authentic Leadership (AL) Graduate Certificate Training, 6-month**. Main instructor: Dr. Susan Skjei. Naropa University, Boulder, CO (Jan. to May, 2015). The AL provided a powerful approach to personal and professional transformation that increases a leader's capacity for clarity, compassion and effective action in life and work. Drawing on the disciplines of neuroscience, Buddhism, complexity science, organizational learning and leadership, the program offered proven methods and practices that help leaders cultivate self-awareness and creativity, strengthen and enhance their relationships with others and effectively lead the changes they want to see in their organizations and the world. The course blended Western leadership practices with meditation training rooted in the wisdom of Eastern contemplative traditions providing learning experience that encourage deep, personal reflection, fast assimilation of conceptual models, and practical application to use in the workplace.

  Dr. Grunwald earned 6 graduate credits (letter grade: A). The AL program included: Two weeks intensive on-site plus online training; individual and group coaching, an individual leadership project.
- Women in Leadership Course (1-day). Sydney University Continuing Education, Sydney, Australia (June 20, 2013).
- Participated in 1-day Workshop "Leadership: Science or Myth?" American Society of Agronomy (ASA) – Crop Science Society of America (CSSA) – Soil Science Society of America (SSSA) National Meeting, New Orleans, LA (Nov. 7, 2007).

Coaching & Mentoring

- Grunwald taught the 2-day workshop 'Coaching and Mindfulness' to wellness coaches at UF GatorWell (Jan. 5-6, 2023).
- Grunwald served as faculty coach in the UF Life Coach Program for first-generation students, Machen Florida Opportunity Scholars (Jan. 1, 2022 – Dec. 31, 2022). Coached: 3 students in spring semester; 4 students in fall semester.
- Attended the Evidence-based Coaching Symposium & Training, Fielding Graduate University, Santa Barbara, CA (May 5-6, 2021). 9 coach continuing education units (CEU).
- Authentic Leadership (AL) Graduate Certificate. Main instructor: Dr. Susan Skjei. Naropa University, Boulder, CO (Jan. to May 2015). 6 graduate credits (letter grade: A). The leadership training included six individual coaching sessions; once a month group coaching sessions). Coach: Carl Baccellieri).

- Sabbatical at the Faculty of Agriculture and Environment, University of Sydney, Sydney, Australia (6 months: Jan. 2013 to July 2013). Training in coaching and leadership – group coaching program (Coach: Nickolas Yu).
- Workshop "Managing People Through Change". Learning Solutions Center, University of Sydney, Sydney, Australia (March 27, April 10, and May 1, 2013; two days training & one coaching session).
- Leadership Maturity Framework Coaching Intensive. Institute for Developmental Coaching, Sydney, Australia (April 25-27, 2013; three-day workshop).
- Coach Program. Learning Solutions Center, University of Sydney, Sydney, Australia (June 11, 18, and 25, 2013; three 1-day training sessions & three individual coaching sessions).
- Attended UF HR Training "Coaching for Success", Gainesville, FL (May 19, 2020).

Honors and Awards Grunwald

- Grunwald was included in the **Stanford University Ranking list of the World's Top 2% of Scientists** (2022; DOI:10.17632/btchxktzyw.4). More details about the global database of standardized citation indicators can be found at: https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4
- UF Institute of Food and Agricultural Sciences (IFAS), top-tier highly cited faculty in IFAS (2021-2022). Grunwald was awarded **membership in the American Association for the Advancement of Science (AAAS)**
- The journal article "Sensitivity assessment of metafrontier data envelopment analysis for soil carbon sequestration efficiency" by Mizuta K., Grunwald S., Phillips M., Moss C., Bacon A. and Cropper W. (2021) published in Ecological Indicators J. was awarded the 'Innovative Research Distinction' and featured in the monthly news by the North American Carbon Program (NACP): https://cce-datasharing.gsfc.nasa.gov/programs/featuredpubs/12/h/0
- 2020 International Science Connect Research Award for research paper "Effects of image pansharpening on soil total nitrogen prediction models in South India" published in Geoderma J. (Xu Y., S.E. Smith, S. Grunwald, A. Abd-Elrahman and S.P. Wani): https://new-science-inventions.sciencefather.com/young-scientist-research-awards/
- ISSN Golden Research Award 2020 for the research paper "Integrative environmental modeling of soil carbon fractions based on a new latent variable model application" published in STOTEN J. (S.H. Adi and S. Grunwald)
- **University of Florida Term Professorship (2017 – 2020)**
- **University of Florida Research Foundation Professorship Award (2017 – 2020)**
- **Soil Science Society of America Fellow Award (2017)**
- Viscarra Rossel R., …. S. Grunwald et al. (2016). A global spectral library to characterize the world's soil Earth-Science Reviews 155, 198–230. doi:10.1016/j.earscirev.2016.01.012. This article won the Best Paper Award of the International Union of Soil Science (IUSS) Pedometrics Commission (2017)
- The UF Mindfulness interdisciplinary team led by Director Dr. Grunwald was awarded the 2016 UF Champions for Change Award (UF Office of Sustainability and the Healthy Gators Coalition)
- **University of Florida Research Foundation Professorship (2010 – 2012)**
- Nominated for the College of Agricultural and Life Sciences (CALS) Teaching and Advising Award, University of Florida (2011)
- **North American Colleges and Teachers of Agriculture (NACTA) Teacher Fellow International Award (2010)**

- Honored as “one of the most valued referees”, Geoderma Journal (2010)
- Nominated for the National Soil Science Society of America Education Award (2009, 2010)
- International Travel Award – IFAS/UF International Programs (summer 2009)
- Best RLO Award 1. Place: K. Chandrasekaran, P. Kuppannan, V. Palanichamy and S. Grunwald for RLO “Assessing the Performance of Tank Irrigation Systems”, Soil and Water Science Department, UF (Feb. 2008)
- Best RLO Award 2. Place: K. Chandrasekaran, P. Kuppannan, V. Palanichamy and S. Grunwald for RLO “Harvesting Rainwater”, Soil and Water Science Department, UF (Feb. 2008)
- **Gamma Sigma Delta – Junior Faculty Award (2007)**
- Nominated by IFAS for the USDA National Awards Program for Excellence in College and University Teaching in the Food and Agricultural Sciences – Teacher Award (2007) and New Teacher Award (2006 and 2005)
- Best Paper Award in the Internet-Based Teaching/Distance Learning session at the 3rd International Conference on Education and Information Systems: Technologies and Applications, Orlando, FL (7/2005)
- Honored by the Digital Library for Earth System Education (DLESE) for excellence in developing teaching materials (ID: DSLESE-000-000-002-435; 3D soil-landscape models) (12/2003)
- Nominated for the Best Paper Award (Pedometrics Working Group – International Union of Soil Sciences): Grunwald S., P. Barak, K. McSweeney and B. Lowery. 2000. Soil landscape models at different scales portrayed in Virtual Reality Modeling Language (VRML). Soil Science 165(8): 598-615.
- Research fellowship DAAD (German Academic Foreign Country Service, Deutscher Akademischer Auslandsdienst) (1996)
- Ph.D. Honors Fellowship State Hessen, Germany (1992 – 1996)

Honors of Graduate Students Advised by Grunwald

- Perseveranca Mungofa received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Sciences Department, UF (2021)
- Perseveranca Mungofa was awarded the V.W. Carlisle Fellowship Award, Soil and Water Sciences Department, UF (2021)
- Katsutoshi Mizuta’s dissertation “Interfacing pedometrics and econometrics to model the efficiency of soil-ecosystem functions at regional scale” was nominated by the Soil and Water Sciences Department for the IFAS-UF Awards of Excellence for Graduate Research (2020)
- Hari Adi Setyono won the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Sciences Department, UF (2018)
- Katsutoshi Mizuta received the Williams B. Robertson Graduate Fellowship (2018)
- Carla Gavilan was awarded the UF Graduate School Doctoral Dissertation award (2018)
- Carla Gavilan received the UF Graduate School Doctoral Dissertation award (2018)
- Carla Gavilan won the best oral presentation award at the Soil and Water Sciences Department Research Forum, Gainesville, FL (2017)
- Carla Gavilan received the second place in the Student Oral Competition, ASA Community “Soil Carbon and Greenhouse Gas Emissions”, Int. ASA-CSSA-SSSA Meeting, Tampa, FL (2017)

- Katsutoshi Mizuta received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Sciences Department, UF (2017)
- Carla Gavilan was awarded the Doris Earl and Verna Lowe Scholarship (2017)
- Katsutoshi Mizuta was awarded the Doris Earl and Verna Lowe Scholarship (2017)
- C. Wade Ross received the UF Graduate School Doctoral Dissertation award (2017)
- Katsutoshi Mizuta received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Sciences Department, UF (2017)
- Carla Gavilan was awarded the Doris Earl and Verna Lowe Scholarship (2017)
- Katsutoshi Mizuta was awarded the Doris Earl and Verna Lowe Scholarship (2017)
- C. Wade Ross received the UF Graduate School Doctoral Dissertation award (2017)
- Katsutoshi Mizuta was selected for the UF/IFAS 2016 Awards of Excellence for Graduate Research (MS level) by the Soil and Water Sciences Department, UF
- Katsutoshi Mizuta was selected for the Best Thesis in the College of Agriculture and Life Sciences, UF in 2016 in the category Soil and Water Sciences.
- Katsutoshi Mizuta was awarded the Robertson fellowship award, Soil and Water Sciences Department, UF (2016)
- Katsutoshi Mizuta received the Outstanding Achievement Award for International Students, International Center, University of Florida (2016)
- Katsutoshi Mizuta was nominated by the Soil and Water Science Department for the Alec Courtelis fellowship (2016)
- Katsutoshi Mizuta received the best graduate student poster award at the Soil and Water Sciences Research Forum (2016)
- Christopher Clingensmith was awarded the William C. and Bertha M. Cornett Fellowship (2016)
- Hamza Keskin was selected for the departmental Excellence in Graduate Studies (M.S.) award (2015)
- Hamza Keskin received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Science Department, UF (2015)
- Katsutoshi Mizuta received the Ben Skulnick Fellowship (2015)
- Pasicha Chaikaew received the departmental Excellence in Ph.D. Studies award (2014)
- Pasicha Chaikaew was selected as the best dissertation in the Soil and Water Science Department and nominated for the UF/IFAS Graduate Research Award (2014)
- Pasicha Chaikaew received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Science Department, UF (2014)
- Christopher Wade Ross received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Science Department, UF (2013)
- Christopher Wade Ross was awarded 1st Place in the Graduate Student Competition of the Global Digital Soil Map Community (ASA) held in Tampa FL at the ASA-CSSA-SSSA International Meeting for his presentation “Spatiotemporal modeling of soil organic carbon stocks across a subtropical region” (#222-5) (Nov. 4-6, 2013)
- Xiong Xiong was awarded 2nd place in the Graduate Student Competition of the Global Digital Soil Map Community (ASA) held in Tampa FL at the ASA-CSSA-SSSA International Meeting for his presentation “Assessing model structure uncertainty using Bayesian model averaging” (#222-1) (Nov. 4-6, 2013)

- Baijing Cao was awarded 3rd Place in the Graduate Student Competition of the Global Digital Soil Map Community (ASA) held in Tampa FL at the ASA-CSSA-SSSA International Meeting for her presentation “Soil carbon modeling across the continental U.S.” (#95-6) (Nov. 4-6, 2013)
- Ploy Chaikaew was awarded 2nd place in the Graduate Student Competition under the Soil and Water Management and Conservation Division, ASA-CSSA-SSSA International Meeting for her presentation "Assessing soil organic carbon change and nutrient loads in surface water in the Suwannee River Basin" (#153-8) (Nov. 4-6, 2013)
- Ploy Chaikaew was awarded 1st place in the Graduate Student Competition GISDay @ the University of Florida for her presentation “Assessing soil organic carbon change and nutrient loads in surface water in the Suwannee River Basin, Florida (Nov. 19, 2013)
- Jongsung Kim received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Science Department, UF (2012)
- Xiong Xiong received the Sam Polston Scholarship Award, Soil and Water Science Department, UF (2012)
- Xiong Xiong's paper was nominated for the Best Paper Award at the Global Workshop Digital Soil Mapping, Sydney, Australia (April 10-13, 2012)
- Xiong Xiong received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Science Department, UF (2011)
- Pasicha Chaikaew earned the 3rd place poster award in Division S5-Pedology, Int. ASA-CSSA-SSSA Meeting, San Antonio, TX (Oct. 16-19, 2011)
- D. Brenton Myers received the Quantitative Environmental Soil Science / Pedometrics Award, Soil and Water Science Department, UF (2010)
- Jongsung Kim was awarded 1st place poster award. GISDay Meeting, University of Florida, Gainesville, FL (Nov. 17, 2010)
- Xiong Xiong earned the 3rd place poster award in Division S5-Pedology, Int. ASA-CSSA-SSSA Meeting, Long Beach, CA (Nov. 1-4, 2010).
- Nominated for Best Paper Award among 120+ papers presented at international meeting: Vasques G.M., S. Grunwald and D.B. Myers. 2010. Search for a multi-scale soil organic carbon spatial model in Florida: Influence of extent, resolution, and geographic region. International Workshop on Digital Soil Mapping, Rome, Italy (May 24-26, 2010)
- Cao Baijing was awarded Ph.D. scholarship by the Chinese Scholarship Council (2010 – 2014)
- Julius Adewopo was awarded the special Alumni assistantship (2010 – 2014)
- Pasicha Chaikaew was awarded fellowship by the Royal Thai Government (2009 – 2012)
- Jongsung Kim was awarded matching assistantship (2008 – 2011) and Grinter fellowship (2008 – 2009)
- D. Brenton Myers earned student award, 9th Int. Conference on Precision Agriculture, Denver, CO (July 20-23, 2008)
- Brandon Hoover (supervised by Grunwald) was awarded the Bill Reve Superior Accomplishment Award (2008)
- Gustavo M. Vasques received Robertson Award, Soil and Water Science Department, UF (2007)
- Gustavo M. Vasques was awarded special Alumni assistantship (2007 – 2011)

- D. Brenton Myers ranked 1st in the student award competition Int. Pedometrics Meeting in Naples, Florida (Sept. 12-14, 2005)
- Sanjay Lamsal ranked 2nd in the student award competition Int. Pedometrics Meeting in Naples, Florida (Sept. 12-14, 2005)
- Rosanna G. Rivero ranked 3nd in the student award competition Int. Pedometrics Meeting in Naples, Florida (Sept. 12-14, 2005)
- Sanjay Lamsal won poster award – Soil and Water Science Research Forum, Gainesville, FL (9/2005)
- Rosanna G. Rivero won poster award – Soil and Water Science Research Forum, Gainesville, FL (9/2005)
- Sanjay Lamsal was awarded 2nd place in the Graduate Student Paper Presentation Contest for his thesis research, Soil and Crop Science Society of Florida, Tallahassee, FL (May 20-21, 2004)
- Christine Bliss received Best Paper Award ASA-CSSA-SSSA Meeting, Seattle, WA (Oct. 31-Nov. 4, 2004)
- Isabel Lopez-Zamora received Best Paper Award ASA-CSSA-SSSA Meeting, Seattle, WA (Oct. 31-Nov. 4, 2004).

Publications

Publication overview:

1. **Grunwald's Google Scholar Profile:**
   http://scholar.google.com/citations?user=XnTnqZ8AAAAJ&hl=en
   Status 1/2023: Number of total citations of her published articles: 9,851
   H-index: 52; i10-index: 111

2. **Grunwald's Research Gate Profile:**
   Publication list: https://www.researchgate.net/profile/Sabine_Grunwald
   Status 1/2023: Number of total citations of her published articles: 8,699
   H-index: 48
   Research Interest Score: 5,509 (score is higher than 99% of all Research Gate members' scores)

3. **ORCID unique identifier, Sabine Grunwald:** 0000-0002-9023-1720

4. **Complete chronological list of Dr. Grunwald's peer-reviewed publications:**
   Journal publications: https://www.sgrunwald.org/journal-publications
   Book publications: https://www.sgrunwald.org/book-publications

Select impactful publications authored/co-authored by Grunwald:
High-impact publications: https://www.sgrunwald.org/high-impact-publications

A high-profile publication in the *Earth Science Review J., 2016* (IF: 9.724 in 2016; current IF: 12.04) of a global team of researchers, including Dr. Grunwald, synthesized a spectral dataset and measured soil data to model various critical soil indicators at global scale. Big data analysis was used to develop global soil maps/models for carbon, clay, and other soil properties demonstrating the impact and mitigation potential under various change stressors, including global climate change and land use change, both causing unprecedented soil degradation. *Global and Brazilian soil spectral carbon AI models* were presented in our article published in Remote Sensing J. (2022) with IF of 4.51.

The journal article of a graduate student (Xiong Xiong) supervised by Grunwald in the *Environmental Modeling and Software J., 2014* (IF: 5.288) provided the first high-resolution gridded soil organic carbon (SOC) assessment and uncertainty assessment for the State of Florida, USA. SOC is critical to sustain soil health and security, it enhances soil nutrient holding to reduce adverse impacts to the environment and mitigates the effects of global climate change. In this publication a new holistic soil-environmental modeling framework was presented using geospatial technologies, machine learning algorithms, and remote sensing. The soil carbon maps have been incorporated in the Florida Forever Project, Department of Environmental Protection, Florida's premier conservation and recreation lands acquisition program.

The article "*Predicting soil properties and interpreting Vis-NIR models from across the continental U.S.*" by Clingensmith and Grunwald (2023) in the Sensors J. (IF: 3.58) provided evidence of cost-effective and accurate proximal soil sensing of soil organic carbon and other soil health properties using machine learning AI models.

The articles "Integrating spectral indices into prediction models of soil phosphorus in a subtropical wetland" by Rivero, Grunwald et al. (2009) published in *Remote Sensing of Environment J.* (IF: 10.164), "Incorporation of satellite remote sensing pan-sharpened imagery into digital soil prediction …" by Xu, Smith, Grunwald, Abd-Elrahman and Wani (2017) in the *ISPRS J. of Photogrammetry and Remote Sensing* (IF: 8.979), among several remote sensing-oriented publications demonstrate creative innovation in remote-sensing supported digital soil mapping and modeling.

Grunwald has published several articles in the *Science of the Total Environment J.* (IF: 10.753), for example, the article "Integrative environmental modeling of soil carbon fractions based on a new latent variable model approach" in 2019 (Adi and Grunwald) features a novel quantitative soil modeling method which complements numerous of her pedometrics and digital soil mapping and modeling-oriented research published in the premier international soil science journal (*Geoderma*, IF: 6.114).

The journal article by Grunwald et al (2011) in the Soil Sci. Soc. Am. J. presented a new conceptual soil factorial modeling framework called STEP-AWBH that has been adopted widely in digital soil mapping (DSM) to predict soil properties and classes. STEP-AWBH has made a major contribution to the field of DSM. STEP-AWBH was also features in the article "Grand challenges in pedometrics-AI research" published in Frontiers in Soil Science (2021).

STEP-AWBH space-time soil model:

- Integration of spatially- and temporally explicit soil forming factors (STEP-AWBH factors; soil-environmental covariates) into a model to infer on soil properties/classes and their evolution
- Factors and soil predictions are spatially-explicit and temporally-explicit
- The STEP-AWBH factors are populated using geospatial technologies including remote and soil proximal sensing
- W (water) and H (human) factors enhance the SCORPAN and CLORPT conceptual models
- Explicitly incorporates anthropogenic forcings including social, cultural, and economic data
- Incorporates bio-, topo-, litho-, pedo- and hydrosphere
- Fuses empirical and process-based knowledge

Overview Grunwald's Publications (status 2/2023)

Type	Subtype	Numbers (1996 – present)
Peer-reviewed publications	Journal articles	129
	Books	2
	Book chapters	41
	Special Issues	3
	Proceedings	37
	Total peer-reviewed publications	**212**
Non-peer-reviewed	Proceedings	17

Peer-Reviewed Publications

Books

1. Patzel N., S. Grunwald, E.C. Brevik and C. Feller (Eds.). 2023. *Cultural understanding of soils*. Springer, New York, NY (in press).
2. Grunwald S. (Ed.). 2006. *Environmental Soil-Landscape Modeling – Geographic Information Technologies and Pedometrics*. CRC Press, New York, p. 488.

Special Issues

1. Grunwald S., S. Daroub and C. Olson (Eds.). 2022-2023. Frontiers in soil science: Women in pedometrics, soil health and soil security: Series of article collections (Special Issue).
2. Zhu A.-X., B. Minasny, S. Grunwald and L. Winowiecki (Eds.). 2016. Introduction to the special issue: Advances in pedometrics. Special section in digital soil mapping, uncertainty and soil carbon validation. Geoderma 263(1).
3. Grunwald S., D.J. Brown and P. Goovaerts (Eds.). 2007. Special Issue Geoderma – Pedometrics. Vol. 140(4), p. 323-455.

Book Chapters

1. Grunwald S. 2023a. Take care of soils: Toward a pluralistic integral soil ethics. In N. Patzel, S. Grunwald, E.C. Brevik, & C. Feller (Eds.), Cultural understanding of soils. Springer, New York, NY (in press).
2. Grunwald S. 2023c. Ecosattvas and ecodharma – Modern Buddhist perspectives of soil and the environment. In N. Patzel, S. Grunwald, E.C. Brevik & C. Feller (Eds.), Cultural understanding of soils. Springer, New York, NY (in press).
3. Grunwald S. and K. Wilcox. 2023b. Soil care, culture, and eco-identities. In N. Patzel, S. Grunwald, E.C. Brevik, & C. Feller (Eds.), Cultural understanding of soils. Springer, New York, NY (in press).
4. Homburg J., S. Grunwald and E.C. Brevik. 2023. From Native American tradition to modern day America, Native origin legends that involve soil and Earth. In N. Patzel, S. Grunwald, E. C. Brevik, & C. Feller (Eds.), Cultural understanding of soils. Springer, New York, NY (in press).
5. Patzel N., S. Grunwald, E.C. Brevik and C. Feller. 2023a. Introduction: What is soil culture? In N. Patzel, S. Grunwald, E.C. Brevik & C. Feller (Eds.), Cultural understanding of soils. Springer, New York, NY (in press).

6. Patzel N., S. Grunwald, E.C. Brevik and C. Feller. 2023b. Synthesis. In N. Patzel, S. Grunwald, E.C. Brevik & C. Feller (Eds.), Cultural understanding of soils. Springer, New York, NY (in press).
7. Grunwald S. and J. Böhner. 2022. Geographical information systems (GIS) and soils. In M. Oliver & U. Stockman (Eds.), Encyclopedia of Soils in the Environment, Elsevier, Amsterdam, Netherlands. Reference Module in Earth Systems and Environmental Sciences. https://doi.org/10.1016/B978-0-12-822974-3.00059-8. Available at https://www.sciencedirect.com/science/article/pii/B9780128229743000598?via%3Dihub
8. Grunwald, S., & LaMontagne, L. 2020. The state of mindfulness at top U.S. public universities: A brief review and lessons learned, pp. 331-353, chapter 19. In S. K. Dhiman (Ed.), The Routledge companion to mindfulness at work. Routledge ISBN 9780367200046.
9. Ceddia M.B., S. Grunwald, É.F.M. Pinheiro, K. Mizuta, C.M. Clingensmith and M.M. Fernandes. 2017. Applying the Meta Soil Model: The complexities of soil and water security in a Permanent Protection Area in Brazil. p. 331-340. In Field D.J., C.L.S. Morgan, and A.B. McBratney (Eds.), Global Soil Security, Springer, New York, NY.
10. Grunwald S., K. Mizuta, M.B. Ceddia, É.F.M. Pinheiro, R. Kay Kastner-Wilcox, C.P. Gavilan, C.W. Ross and C.M. Clingensmith. 2017. The Meta Soil Model: An Integrative Multi-Model Framework for Soil Security. p. 305-317. In Field D.J., C.L.S. Morgan, and A.B. McBratney (Eds.), Global Soil Security, Springer, New York, NY.
11. Grunwald S., C.M. Clingensmith, C.P. Gavilan, K. Mizuta, R. Kay Kastner Wilcox, É. F.M. Pinheiro, M.B. Ceddia and C.W. Ross. 2017. Integrating New Perspectives to Address Global Soil Security: Ideas from Integral Ecology. p. 319-329. In Field D.J., C.L.S. Morgan, and A.B. McBratney (Eds.), Global Soil Security, Springer, New York, NY.
12. Chaikaew P., S. Grunwald and X. Xiong. 2016. Estimation of the actual and attainable terrestrial carbon budget. p. 153-164. In Zhang G.-L., Brus D.J., Liu F., S. Xiao-Dong and Lagacherie P. (Eds.). Digital Soil Mapping Across Paradigms, Scales and Boundaries. Springer, New York, NY.
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21. McKay Philippe J., S. Grunwald, X. Shi and R. Long. 2008. Evaluation of the transferability of a knowledge-based soil-landscape model. 3rd Global Conference on Digital Soil Mapping organized by the International Union of Soil Sciences, Soil Science Society of America and Utah State University, Logan, UT, Sept. 30-Oct. 3, 2008.
22. Vasques G.M. and S. Grunwald. 2008. Soil organic carbon estimation from lab-based spectroscopy in the State of Florida. 3rd Global Conference on Digital Soil Mapping organized by the International Union of Soil Sciences, Soil Science Society of America and Utah State University, Logan, UT, Sept. 30-Oct. 3, 2008.
23. Myers D.B., N.R. Kitchen, R.J. Miles, K.R. Sudduth, E.J. Sadler and S. Grunwald. 2008. Multi-sensor estimation of claypan soil profile properties. 9th Int. Conference on Precision Agriculture, Denver, CO, July 20-23, 2008.
24. Myers D.B., N.R. Kitchen, K.A. Sudduth, S. Grunwald, R.J. Miles, E.J. Sadler and R. Udawatta. 2008. Combining proximal and penetrating conductivity sensors for high resolution soil mapping. Global Workshop on High Resolution Digital Soil Sensing and Mapping, Sydney, Australia, Feb. 5-8, 2008.
25. Chandrasekaran K., P. Kuppannan, V. Palanichamy and S. Grunwald. 2008. Assessing the performance of tank irrigation systems. EcoLearnIT Reusable Learning Object Online Journal #3 (http://ecolearnit.ifas.ufl.edu/viewer.asp?rlo_id=93).
26. Chandrasekaran K., P. Kuppannan, V. Palanichamy and S. Grunwald. 2008. Harvesting rainwater. EcoLearnIT Reusable Learning Object Online Journal #2 (http://ecolearnit.ifas.ufl.edu/viewer.asp?rlo_id=80).
27. Grunwald S. 2008. Geographic information systems and water management. EcoLearnIT Reusable Learning Object Online Journal #6 (http://ecolearnit.ifas.ufl.edu/viewer.asp?rlo_id=16).
28. Grunwald S. 2008. Sustainable watershed management. EcoLearnIT Reusable Learning Object Online Journal #1 (http://ecolearnit.ifas.ufl.edu/viewer.asp?rlo_id=87).
29. Beck H.W., K.T. Morgan, J.M.S. Scholberg and S. Grunwald. 2006. Implementation of in-season irrigation and nutrient yools for minimizing environmental impacts of citrus and sugarcane production. World Congress on Computers in Agriculture, Orlando, FL, July 24-26, 2006.
30. Morgan K.T., H.W. Beck, J.M.S. Scholberg and S. Grunwald. 2006. In-season irrigation and nutrient decision suport system for citrus production. World Congress on Computers in Agriculture, Orlando, FL, July 24-26, 2006.
31. Chen S.-S. and S. Grunwald. 2005. The spatial/temporal indexing and information visualization genre for environmental digital libraries. Int. Conference on Universal Digital Library (ICUDL2005), Zhejiang University, Hangzhou, China, Oct. 31 - Nov. 1-2, 2005 (10 pages; ID #178).
    About 200 papers were submitted and approximately 10% accepted for oral presentations.
32. Grunwald S. and G.L. Bruland. 2005. Expanding distance education in the spatial sciences. pp. 99-102. International Conference on Education and Information Systems: Technologies & Applications (EISTA), Orlando, FL, July 14-17, 2005.
    Authors who submitted abstracts were selected by a program committee to develop proceeding papers that were included in the conference proceedings book. 230 papers were accepted for presentation/proceedings out of 450 submitted abstracts. This paper

was selected as the best paper in the session "Internet-Based Teaching / Distance Learning" (Professor Freddy Malpica, EISTA 2005 General Chair).

33. van Griensven A., T. Meixner, S. Grunwald and R. Srinivasan. 2005. Evaluation methods for SWAT models. SWAT 3rd Int. Conference, Zuerich, Switzerland, July 11-15, 2005.
34. Grunwald S., V. Ramasundaram, N.B. Comerford and C.M. Bliss. 2004. How realistic are our translations of real soil-landscapes and ecosystem processes? pp. 34-44. Global Workshop on Digital Soil Mapping, Montpellier, France, Sept. 14-17, 2004.
35. Grunwald S., K.R. Reddy and J.P. Prenger. 2004. Characterization of the spatial and parameter variability in a subtropical wetland. pp. 89-74. Int. Environmetrics Society & Symposium on Spatial Accuracy Assessment, Portland, ME, June 28-July 1, 2004.
36. Grunwald S. 2003. 3D geographic information technology used for site-specific agricultural management. pp. 83-88. 4th European Conference on Precision Agriculture (ECPA), Berlin, Germany, June 15-18, 2003 (proceeding paper - oral presentation).
    In total 225 proceeding papers for oral presentations were accepted by the program committee. Sixty percent of all submitted papers were accepted for oral presentations and twenty-five percent of all submitted papers were accepted for a poster presentation.
37. Grunwald S., D.J. Rooney, K. McSweeney and B. Lowery. 1999. Application of a profile cone penetrometer to distinguish between soil materials. pp. 41-44. 3rd Conference of the Working Group on Pedometrics of IUSS, Sydney, Australia, Sept. 27-29, 1999.

Non-Refereed Conference Proceedings

1. Richter D. deB Jr., S. S. Andrews, S. Billings, C.A. Cambardella, N. Cavallaro, J. DeMeester, A.J. Franzluebbers, K. Glasener, S. Grunwald, H. Janzen, M. Kramer, J.K. Ladha, K. Lajtha, G. Liles, D. Markewitz, A. Mermut, C. Palm, D.A. Robinson, P. Smith, C. Stiles, R. L. Tate, A.J. Tugel, H. van Es, L. West, S. Wills, D. Yaalon, T.M. Zobeck. 2010. Why is soil change important to SSSA and to society at large? Whitepaper, All-Division SSSA Work Group on Soil Change, Dec. 2010.
2. Myers D.B., S. Grunwald, N.B. Comerford and W.G. Harris. 2010. Digital mapping of soil carbon fractions for regional assessment of soil carbon spatial variability in Florida, USA. Int. Workshop on Digital Soil Mapping, Rome, Italy, May 24-26, 2010.
3. Vasques G.M., S. Grunwald and D.B. Myers. 2010. Search for a multiscale soil organic carbon spatial model in Florida. Part I: Influence of extent, resolution, and geographic region. Int. Workshop on Digital Soil Mapping, Rome, Italy, May 24-26, 2010.
4. Vasques G.M., S. Grunwald and D.B. Myers. 2010. Search for a multiscale soil organic carbon spatial model in Florida. Part II: Spatial dependence of soil-landscape relationships. Int. Workshop on Digital Soil Mapping, Rome, Italy, May 24-26, 2010.
5. Grunwald S. 2007. E-delivery methods of learning materials. Proceedings Paper Indo-US Workshop on Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.
6. Grunwald S. 2007. Reusable Learning Objects. Proceedings Paper Indo-US Workshop on Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.
7. Grunwald S. 2007. Geographic Information Systems - Water Management. Proceedings Paper Indo-US Workshop on Innovative E-technologies for Distance Education and

Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.

8. Grunwald S. and S. Daroub. 2007. Proceedings Paper E-learning tools. Indo-US Workshop on Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.
9. Grunwald S., V. Ramasundaram, A. Mangeot, N.B. Comerford and C.M. Bliss. 2003. Space-time modeling and visualization of water table dynamics in a flatwood landscape. Paper No. 033064. ASAE Annual Int. Meeting, Las Vegas, NV, July 20-23, 2003.
10. Grunwald S. and T.F.A. Bishop. 2003. Modeling water quality in the Sandusky Watershed, Ohio. Paper No. 032058. ASAE Annual Int. Meeting, Las Vegas, NV, July 20-23, 2003.
11. Grunwald S. 2002. Geographic information technology applied to land resource management. Paper No. 023030. ASAE Int. Meeting / CIGR World Congress, Chicago, IL, July 29-31, 2002.
12. Grunwald S., P. Barak and D.J. Rooney. 2001. Web-based virtual models for the earth science community. Paper No. 013029. ASAE Int. Meeting, Sacramento, CA, July 29-Aug. 1, 2001.
13. Grunwald S. and P. Barak. 2001. Virtual reality modeling in earth sciences. Int. Western MultiConference - Virtual Worlds and Simulation. Society for Computer Simulation International (SCS), Phoenix, AZ, Jan. 7-11, 2001.
14. Grunwald S., P. Barak, K. McSweeney, B. Lowery and P.J. Fagan. 2000. Soil landscape models at different scales portrayed in Virtual Reality Modeling Language (VRML). pp. 121-126. Int. WesternMulti Conference - Environmental Modeling and Simulation. The Society for Computer Simulation International (SCS), San Diego, CA, Jan. 23-27, 2000.
15. Grunwald S. 1997. Introduction to AGNPS (Agricultural Non-Point Source Pollution Model) Part I. Int.Workshop “Experiences with Soil Erosion Models”, Prague, Czech Republic, Oct. 6-8, 1997.
16. Grunwald S. 1997. Application of AGNPSm in German Watersheds Part II. Int. Workshop “Experiences with Soil Erosion Models”, Prague, Czech Republic, Oct. 6-8, 1997.
17. Chaubey I., C.T. Haan, J.M. Salisbury and S. Grunwald. 1997. Effect of spatial variability of rainfall on modeling hydrologic/water quality processes. Paper No. 972099. ASAE Annual Int. Meeting, Minneapolis, MN, Aug. 10-14, 1997.

Editor

Editorial Activities:

- Chief Editor Frontiers Soil Science Journal, Section Pedometrics (9/2020 – present)
- Editorial Board of Sensors J., Section Smart Agriculture (11/2021 – present)
- Associate Editor Frontiers Environmental Science Journal (11/2014 – present)
- Associate Editor Soil Sci. Soc. Am. Journal (1/2008 – 1/2014)
- Editorial Board Geoderma Journal (3/2007 – 5/2019)
- Editor and Developer of the EcoLearnIT Reusable Learning Object System and Journal (6/2006 – 6/2018)

Research

Broad research interests:

Sabine Grunwald's academic research focus has been on inter- and transdisciplinary studies synthesizing understanding from human, biophysical and ecological domains to address wicked and complex regional and global human-environmental problems.

Specific research interests and expertise:

- Pedometrics, pedo-econometrics and digital soil mapping
- AI (artificial intelligence): machine learning and deep learning algorithms applied in soil, water and ecosystem sciences
- Carbon modeling
- Regenerative agriculture and climate and carbon smart agricultural management
- BIGDATA geospatial modeling
- Soil health, soil security, and soil quality
- Soil proximal sensing (visible, near-infrared, and mid-infrared spectroscopy) and remote sensing
- Integral ecology
- Understand the impact of environmental stressors (e.g., land use and global climate change) on soil and terrestrial carbon dynamics
- Develop multi-scale predictive models of soil and environmental properties across various spatial and temporal scales
- Investigate biophysical feedbacks (soil-vegetation-water-atmosphere interactions) and interplay with the human domain
- Engage in ecosystem service valuation; and investigate human's beliefs, ethical values, cognizance and perceptions of complex environmental problems

Descriptions of Grunwald's research program:
https://www.sgrunwald.org/research-program

Significance and Impact of Research

(1) Dr. Grunwald's ***AI soil-ecosystem modeling approach*** using machine and deep learning algorithms used in various of her research projects has focused on regenerative agriculture, soil health, and climate smart management. Our $15 million USDA-funded project "Vibrant Futures" investigates carbon budgets and markets in specialty crops in 5 states in the U.S.". ***Significance:*** AI is pivotal to assess (a) soil carbon stocks and sequestration rates from field to global scales, (b) effectivity of climate smart agricultural management practices, (c) ecosystem service bundles, and (d) soil hydrologic – soil carbon interaction effects. Soil spectral data, spectral data and indices derived from remote sensing, and geospatial environmental datasets are used to quantify soil carbon change, soil and crop health, and greenhouse gas emissions (CO_2, CH_4 and N_2O) in various agro-ecosystems using data-driven machine engines.

(2) Dr. Grunwald's research team has ***interfaced pedometrics and econometrics*** to assess various soil and ecosystem functions (e.g., soil carbon sequestration efficiency, net primary productivity efficiency) using the Data Envelopment Analysis (DEA) framework. ***Significance:*** Pedo-econometrics is a progressive and emergent field that allows to (a) quantify complex concepts, such as soil health, soil security, ecosystem resilience, ecosystem efficiency; and (b) optimize management (e.g., optimize soil carbon sequestration efficiencies through management practices such as no-tillage or residue management that are attainable based on site-specific environmental conditions). Input orientation efficiency scores are interpreted in such a way that a given quantity of outputs (e.g., a target sequestration value of soil C sequestration) can be achieved by adjusting the quantity of inputs, while output orientation efficiency scores infer on the degree of outputs that can be produced with given sets of site-

specific environmental inputs (e.g., soil and land use condition, precipitation or irrigation, fertilization).

(3) Her research program focuses to better understand ***soil health, soil security, and soil quality*** using interdisciplinary and transdisciplinary approaches integrating soil science, geoscience, remote sensing, proximal soil sensing, environmental science, spatial statistics, computational science, social psychology, culture, and philosophy.

(4) ***Integral ecology*** provides a model to study social-environmental phenomena. Soil degradation and loss in soil health, like many of society's 'wicked' environmental problems, share similar characteristics; they are global, complex, difficult to resolve and are interconnected across environmental, social, cultural, and political spheres, and present a risk to society. Grunwald's research team investigated the social-psychological perceptions, beliefs and values of individuals to soil and ecosystem health and degradation as well as ecosystem services. ***Significance:*** Findings suggest that soil valuations and beliefs differ along the urban-rural gradient in south Florida with a variety of influencing factors, such as connectivity to nature, social normative factors, economic status, gender, cultural beliefs, political alignment, and others. The closer physically, emotionally, and culturally the connectivity and interaction between individuals and soils the more they are motivated to protect soils from degradation and care about soils. Findings in our survey study suggested that people in the large Suwannee River Basin are willing to pay only less than $2/household and year for ecosystem services, worth less than a fast-food meal.

(5) Rising CO_2 emissions in the atmosphere and effects on global climate change have been documented and future impacts are uncertain but potentially devastating. ***Soil carbon (C) sequestration*** has been suggested to mitigate global climate change providing long-term storage of C in the soil. Carbon fluxes between soil, biotic, and atmospheric pools are dynamic in space and through time and dependent on a multi-factorial system of environmental and anthropogenic drivers. Dr. Grunwald's research is focused to quantify C sources, sinks, and ecosystem processes that modulate the global C system to identify imbalances and counteract global climate change (2 CRIS and multiple federally-funded research projects: USDA, NRCS-CESU). Her research team estimated that 2.256 Pg C is stored in Florida's soils with average soil organic C of 11.64 kg m^{-2} based on geospatial landscape analysis, which is a magnitude of order higher than other States in the U.S. To assess the ***impact*** of this carbon science research it was estimated by Grunwald and colleagues that evolving C markets could support greenhouse gas mitigation through forestry and agriculture equal to a value of $340 million per year as C credits for the State of Florida. Grunwald and her team also assessed how land use shifts may impact C stocks and pools. Implementation of conservation tillage on half of Florida's cropped lands equal carbon credits of about $34.4 million.

(6) In the $20 million ***PINEMAP research project*** (http://pinemap.org; Pine Integrated Network: Education, Mitigation, and Adaptation project; 2011-2017) funded by the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) we assessed the impact of global climate change on 20 million acres of planted pine forest in the southeastern U.S. (PI: T.A. Martin; one of the 50 co-PIs: Sabine Grunwald). PINEMAP evaluated adaptation and mitigation strategies and economic and ecological services using monitoring and modeling approaches. In a sub-project of PINEMAP, Dr. Grunwald's teams focused on ***modeling of terrestrial carbon dynamics***. Climate projections indicate that the southern U.S. will become warmer and potentially drier by the end of the 21st century. The overarching objectives were to: (i) quantify current terrestrial carbon stocks across the southern US and (ii) assess the response of forest productivity and carbon cycling to climate perturbations. Her team used (i) soil and ecosystem measurements at 4 high-intensity study sites (tier 1) and 326 regional sites (tier 2); (ii) remote sensing and geospatial environmental BIGDATA sets; and (iii) mechanistic

(DayCent model) and AI machine learning methods. Regionally downscaled representative concentration pathways (RCP 4.5 and 8.5) were used to represent a range of potential climate scenarios. ***Significance***: DayCent simulations covering the measurement period (2012 to 2014) were validated with field-based data and indicated robust agreement across the region, with mean absolute percentage error ranging from 6% for soil organic carbon to 51% for net primary productivity. DayCent forecasts to the end of the 21st century demonstrate that forest productivity is clearly sensitive to climate perturbations. Our findings suggest that the terrestrial carbon sink capacity of pine forests will increase under a broad range of potential climate scenarios.

(7) Various ***soil spectral libraries*** (based on visible/near-infrared, VNIR; and mid-infrared, MIR, spectroscopy) have been built by Grunwald and her team for the State of Florida, the U.S., Peru, Brazil, India, and at global scale. ***Impact*:** Soil spectral data allow cost-effective, accurate, and rapid proximal sensing through predictive modeling (e.g., AI machine learning algorithms such as Random Forest; and deep learning algorithms) of multiple soil properties (e.g., soil organic carbon (SOC), C fractions such as recalcitrant and labile C, soil texture, pH, cation exchange capacity, macro- and micronutrients, and more).

(8) Dr. Grunwald's USDA-funded project ***'Rapid Assessment and Modeling of Soil C Storage and Pools across Florida'*** is a Core Project of the North American Carbon Program (NACP). The project involved upscaling of site-specific soil C stocks and C pools (fractions) to infer on processes using advanced geostatistical methods, GIS, and remote sensing. The response of land use shifts and global climate warming on Florida's soil C budgets was assessed. ***Significance***: Major significant factors to explain SOC variation were vegetation and soil hydrology, followed by climatic factors. The surface 20 cm soils acted as a net sink for C with the median SOC significantly increasing from 2.69 to 3.40 kg m^{-2} over the past decades (1965 – 2009).

(9) In the Santa Fe River Watershed (SFRW) spatially-explicit relationships between soil C and (i) labile, recalcitrant, and mineralizable C; (ii) nitrogen (N) and fractions; (iii) phosphorus (P) and fractions; and (iv) numerous environmental landscape properties (e.g., land use, topography, climate, and hydrology) were modeled to better understand ***interactions between C, N and P biogeochemical cycles and ecosystem processes*.** A remote sensing-based land use change trajectory analysis coupled with C-landscape model assessed the impact on C storage across the watershed. The ***impact*** of this research is documented in several publications in high-impact journals advancing pedometrics and geospatial sciences.

(10) ***Multi-scale behavior of soil C*** across various expanding and contracting spatial scales was investigated to analyze whether models are scale variant or invariant (i.e., show self-similar/fractal behavior) and identify the key environmental drivers (natural and anthropogenic factors) that modulate soil C patterns. Scaling parameters/functions were derived that allow seamless up- and down-scaling of soil C. The ***impact*** of this research are manifold: (i) Knowledge about scaling behavior of properties and processes reduces costs to implement future soil sampling designs and monitoring programs; (ii) environmental indicator variables that are sensitive to scaling of soil C should be measured with higher accuracy in future applications; and (iii) knowing the critical scale at which a property or process shifts behavior has ecological implications, which in turn impacts ecosystem services, and their valuation.

(11) Dr. Grunwald's research team assessed ***spatial patterns of various biophysical soil properties*** including P, N, and metals in various aquatic (e.g., Greater Everglades) and mixed land use systems (e.g., SFRW) impacted by multiple stressors causing soil and water quality degradation. Pedometrical methods (Bagged Regression Trees, Random Forest, geostatistics, mixed deterministic/stochastic models), GIS, and remote sensing, were used to model spatio-temporal patterns. In addition, her research team developed and validated a mechanistic

simulation model (OntoSim) to simulate water flux and P transport using an ontology-based modeling approach. The ***outcomes*** of these projects provide land resource managers with a framework for informed decision making to minimize adverse impacts on the environment (e.g., reduce nutrient loads), place best management practices, and implement restoration plans.

Over-arching research projects conducted by Grunwald and colleagues:
(1) CRIS project: SWS-04056 FLA-SWS-04056 (2003 – 2008): GIS-based spatial modeling applied to land resource management.

(2) CRIS project: FLA-SWS-004666 (USDA-NRI) (2007 – 2012): Rapid assessment and trajectory modeling of soil carbon across a southeastern landscape (Florida). This project was selected as a *Core Project of the North American Carbon Program*.

(3) McIntire Stennis project (2009 – 2014): Inverse carbon footprints for forested ecosystems – role of soils as carbon reservoirs.

(4) CRIS REEport National Institute of Food and Agriculture (NIFA) (2020 – 2025): Integral soil security. Project No. FAL-SWS-006055; Accession No. 1025568.

External Research Funding

Submitted proposals in 2023:

- Foundation for Food & Agriculture Research (FFAR) – Regenerative Agriculture for Resilient Farms and Value Chains. Soil proximal sensing for carbon accounting and regenerative agriculture. Pre-proposal (role: Co-PI; $300,000).
- USDA – The U.S.-Brazil integrative science partnership between USDA, UF, and Embrapa. Group 1: Precision management, big data, and artificial intelligence (submission in March 2023).
- American College Health Foundation (ACHF): Multi-dimensional well-being: Vibrant flourishing of the University of Florida community (role: Co-PI; $3,500).

Submitted research proposals in 2022:

- USDA Climate Smart Agriculture: A vibrant future – Pilot projects for climate-smart fruit and vegetable production, marketing, and valuation of ecosystem services (Co-PI; whole project budget $15 million; Grunwald's UF subaward: $1.334 million) – *funded*.
- USDA-NRCS-NHQ-SOILS: Novel remote sensing and AI techniques for real-time soil moisture monitoring using soil survey data (role: Co-PI; $290,465) – *funded*.
- USDA-NRCS-NHQ-SOILS: The Alaska Soil Data Bank (ASDB): A database for harnessing non-NRCS legacy data for digital soil mapping initiatives in Alaska (role: Co-PI; submitted budget $421,311 – *funded budget:* $284,367.
- UNESCO International Geoscience Program: Capacity building networks and improved methodologies for increased interoperability mapping and monitoring of carbon stocks [focus on Latin America] (2022-2027; $50,000; role: Co-PI) – *funded.*
- Keck Institute for Space Studies – Managing soil organic carbon for climate change mitigation: Multiscale quantification through remote sensing, AI and biogeochemical models (workshop proposal) (2023; role: Core Team Member) – *funded*.
- NSF – AI Institute: Prediction & tracking for resource-efficient ecosystems (PTREE) (pre-proposal to compete for full proposal submission, 2-stage application process) (role: Co-PI).
- NSF – Improving Undergraduate STEM Education-Education and Human Resources (IUSE: HER): Mindfulness-Assisted AI STEM Undergraduate Education (9/2022-9/2025; role: co-PI; $299,999).

- NSF-BSF: Resisting distraction – from neural markers to intervention: An AI application (03/01/2023 – 02/28/2026; role: External Advisory Board member; $651,972). [resubmission]
- IFAS Instrumentation seed grant – Pika Vis-NIR-SWIR hyperspectral imaging system for indoor, outdoor and airborne remote sensing of soil, water, and plant characterization ($75,000; role: Co-PI).
- European Union, HORIZON-MSCA-DN-2022 Program – Digital Soil Science Supporting a Secure and Sustainable Society (D6S)" (2023-2028; role: Scientific Advisory Board & Evaluator member of this large-scale project).
- USDA-AFRI – DSFAS-AI: Exploring the potential of artificial intelligence to understand the spatial dynamics and variability of shallow and deep soil properties (8/2023-8/2026; role: co-PI; $649,878) – resubmitted proposal.

Submitted research proposals in 2021:

- UF AI Seed Grant – UF Informatics Institute: An AI approach to mindfulness: Immersive human-environmental interactions on nature sounds, natural destinations, and guided meditation (1 year; $39,877; role: Co-PI) – *funded*.
- USDA-AFRI – DSFAS-AI: Exploring the potential of artificial intelligence to understand the spatial dynamics and variability of shallow and deep soil properties (1/2022-1/2026; role: co-PI; $649,878). Ranked excellent without funding.
- Florida Blue Foundation – 2021 Health Equity Grant Program: The Center for Health Equity and Social Justice (4 years; $1.511 million; role: Track 3 Co-leader). Proposal ranked in the top three tier, but it was not selected for funding.
- NSF-BSF: Resisting distraction – From neural markers to intervention (10/2021 – 10/2024; role: External Advisory Board member; $651,972).
- NSF-Dynamics of Integrated Socio-Environmental Systems (DISES) – Deep integration of socio-environmental systems and multi-hazard disasters: AI modeling of resilience, adaptation and transformation (2022-2027; role: PI; $1.57 million).

Specific Externally Funded Research Projects

- USDA Climate Smart Agriculture: A vibrant future – Pilot projects for climate-smart fruit and vegetable production, marketing, and valuation of ecosystem services (Co-PI; whole project budget $15 million; Grunwald's UF subaward: $1.334 million). Start: May 1, 2023 (5 yrs.).
- USDA-NRCS-NHQ-SOILS: Novel remote sensing and AI techniques for real-time soil moisture monitoring using soil survey data (role: Co-PI; $290,465).
- USDA-NRCS-NHQ-SOILS: The Alaska Soil Data Bank (ASDB): A database for harnessing non-NRCS legacy data for digital soil mapping initiatives in Alaska (role: Co-PI; $284,367)
- UF Artificial Intelligence (AI) Seed Grant – UF Informatics Institute: An AI approach to mindfulness: Immersive human-environmental interactions on nature sounds, natural destinations, and guided meditation (2022; $39,877; role: Co-PI)
- UNESCO International Geoscience Program: Capacity building networks and improved methodologies for increased interoperability mapping and monitoring of carbon stocks [focus on Latin America] (2022-2027; $50,000; role: Co-PI)

- Keck Institute for Space Studies – Managing soil organic carbon for climate change mitigation: Multiscale quantification through remote sensing, AI and biogeochemical models (workshop proposal) (2023; role: Core Team Member)
- National Institute of Food and Agriculture (NIFA) / USDA – Integrating research, education and extension for enhancing southern pine climate change (2011-2016; role: Co-PI / one out of 50 Co-PIs; total budget $20 million; Grunwald's budget: $721,944)
- National Science Foundation (NSF) / EAGER Program – Development of a geospatial soil-crop inference engine for smallholder farmers (2012-2014; role: PI; $292,033)
- International Potato Center (CIP) / Consultative Group on International Agricultural Research (CGIAR) – Water, Land and Ecosystems (2012-2014; role: PI; $90,000)
- Natural Resources Conservation Service (NRCS) / U.S. Department of Agriculture (USDA) National Soil Survey Center – U.S. soil carbon assessment (2011-2014; role: PI; $243,782)
- UF Opportunity Fund – Conceptual design study for a remote sensing nanosatellite mission (2011-2013; role: Co-PI; $78,000)
- Florida Energy Systems Consortium (FESC) – Database infrastructure for integrative carbon science research (2009-2012; role: PI; $199,440)
- Planet Action – Spectral mapping of high-carbon storage ecosystems (2010-2012; role: PI; $10,000)
- NRCS / USDA through University of Idaho – Soil characterization data Florida (2010-2011; role: PI; $11,000)
- University of Sydney, Australia – International Program Development Fund – Soil carbon, effects of land use and climate change across geographic gradients (2010-2011; role: Co-PI; $88,700)
- USDA/T-STAR Tropical/Subtropical Agricultural Research – Using diffuse reflectance spectroscopy to quantify and predict soil carbon content in agricultural soils of Hawai'i (2009-2011; role: Co-PI; $192,772)
- National Research Initiative (NRI) / USDA – Rapid assessment and modeling of changes in soil carbon storage and turnover in a southeastern landscape (2007-2011; role: PI; $380,000)
- AG*IDEA Consortium – Planning Grant (to develop Masters of Soil, Water, and Environmental Science) (2009-2010; role: Co-PI; $7,500)
- Florida Department of Environmental Protection (FDEP) – Implementation of in-season irrigation & nutrient tools for minimizing environmental impacts of citrus and sugarcane production (Phase 3) (2009-2010; role: Co-PI; $56,657)
- NRCS / USDA; Cooperative Ecosystem Studies Unit (CESU) – Remote sensing supported digital soil mapping in south Florida (Phase 2) (2008-2010; role: PI; $94,494)
- Biomass Investment Group Inc. (BIG) – Assessment of soil carbon storage using analytical and spectral methods (2008-2010; role: PI; $334,664)
- NRCS / Cooperative Ecosystem Study Unit (CESU) – Remote sensing supported digital soil mapping in south Florida (Phase 1) (2008-2009; role: PI; $32,843)
- Department of Environmental Defense (DED) – Opportunities for greenhouse gas reduction through forestry and agriculture in Florida (2006-2007; role: Co-PI; $75,000)
- Everglades Agricultural Area Environmental Protection District / South Florida Water Management District (SFWMD) – Implementation and verification for BMPs for reducing phosphorus (2006-2008; role: Co-PI; $275,000)

	– National Association of State Universities and Land-Grant Colleges (NASULGC) / U.S.- India Agricultural Knowledge Initiative (AKI) – Information and communication technologies for capacity building in water management: U.S. India collaborative extension/outreach and distance education (2006-2009; role: Co-PI; $59,883) – Florida Tomato Committee – Evaluating factors affecting movement of the silverleaf whitefly and tomato yellow leaf curl virus (Phase 2) (2006-2007; role: Co-PI; $14,030) – NRCS / CESU – Linking experimental and soil spectral sensing for prediction of microbial bioavailability of organic C, N and P in soils at the landscape scale (2006-2007; role: PI; $105,161) – FDEP – Implementation of in-season irrigation & nutrient tools for minimizing environmental impacts of citrus and sugarcane production (Phase 2) (2006-2009; role: Co-PI; $407,159) – U.S. Agency for International Development (USAID) – Strengthening Environmental and Agricultural Capacity through Distance Education (SAEC-DE): A Collaborative program between the University of Florida and CIAT (2006-2008; role: Collaborator; $45,120) – NRCS / CESU – Linking experimental and soil spectral sensing for prediction of soil carbon pools and carbon sequestration at the landscape scale (2005-2006; role: PI; $61,708) – NSF / Integrative Graduate Education Research and Training Program (IGERT) – Wise use of water, wetlands, and watersheds (2005-2012; role: Collaborator; $3.3 million) – SFWMD – Baseline characterization of pilot Stormwater Treatment Areas (STAs) in the Lake Okeechobee Watershed (Taylor Creek STA) (2005-2006; role: Collaborator; $40,250) – Florida Department of Agriculture and Consumer Services (FDACS) – Integration and verification of water quality and crop yield models for BMP planning (2005-2009; role: Collaborator; $1.9 million) – Department of the Interior (DOI) / Critical Ecosystem Studies Initiative (CESI) – Rapid assessment of restoration performance measures at multiple scales in the Greater Everglades using near infrared reflectance spectroscopy (2005-2006; role: Co-PI; $99,560) – USDA / T-STAR – GIS-based spatial analysis of movement of silverleaf whitefly and begomovirus (Phase 1) (2005-2007; role: Co-PI; $40,656) – USDA / Cooperative State Research, Education and Extension Service (CSREES) – Geo-temporal estimation and visualization of nitrogen in a mixed-use watershed (Santa Fe River Watershed) (2002-2006; role: PI; $645,000) – FDACS – Hydrologic and biogeochemical processes regulating phosphorus retention in the Lake Okeechobee Drainage Basin (2002-2007; role: Co-PI; $1.9 million) – SFWMD – Long-term changes in phosphorus storage in selected hydrologic units of the Everglades (Everglades Soil Mapping) (2002-2006; role: Co-PI; $475,000) – FDEP – Implementation of grower's evaluation of a web-based nutrient management plan support (NUMAPS) system for Florida crops (Phase 1) (2002-2005; role: Co-PI; $299,889)
External and internal funding for graduate students advised by Grunwald	– Christopher M. Clingensmith, Ph.D. student. USDA-NIFA fellowship pre-doctoral (2017-2020; $94,984) – Kay Wilcox-Kastner, Ph.D. student. Delores A. Auzenne Dissertation Award (summer and fall 2019; $15,000) – Christopher M. Clingensmith, Ph.D. student. Delores A. Auzenne Dissertation Award (spring and summer 2019; $15,000)

- Katsutoshi Mizuta, Ph.D. student; Japanese government Ph.D. fellowship award, JASSO: Tuition and stipend for 3 years: up to $20,000 USD/yr for tuition and $900 USD/mo. for 3 years (2016-2019; $92,400)
- Carla Gavilan, Ph.D. student. Graduate School Doctoral Dissertation Award (2018; $15,000)
- C. Wade Ross, Ph.D. student. Graduate School Doctoral Dissertation Award (2017; $15,000)
- Hari Adi Setyono, Ph.D. student. Scholarship from the Indonesian government (2014-2018; $150,000)
- Kay Wilcox-Kastner, Ph.D. student. UF-SWS Department matching assistantship co-funded by Grunwald's Pedometrics, Landscape Analysis, and GIS Laboratory (2014-2018; $72,000)
- Hamza Keskin, M.S. student. Scholarship from the Turkish government (2013-2015; $78,000)
- Katsutoshi Mizuta, M.S. student. Japanese government Ph.D. fellowship award, JASSO (2014-2016; $76,400)
- Yiming Xu, Ph.D. student. Fellowship from the Chinese Scholarship Council (2012-2016; $80,000). Co-funded with matching assistantship from the UF School of Natural Resources.
- Carla Gavilan, Ph.D. student. UF graduate assistantship (2012-2015; $88,000)
- Pasicha Chaikaew, Ph.D. student. Fellowship from the Royal Thai government (2009-2014; $149,600)
- Jongsung Kim, Ph.D. student. UF-SWS Department matching assistantship (2008-2012; $66,200)
- Xiong Xiong, Ph.D. student. Grinter fellowship (2010; $2,000)
- Gustavo M. Vasques, Ph.D. student. UF Alumni fellowship (2007-2011; $88,000)

Internal Funding to Support Teaching and Research

- UF Artificial Intelligence (AI) Seed Grant – UF Informatics Institute: An AI approach to mindfulness: Immersive human-environmental interactions on nature sounds, natural destinations, and guided meditation (2022; $39,877; role: Co-PI)
- McIntire Stennis Funding (11/2021 to 5/2022): $2,000
- UF-Institute of Food and Agricultural Sciences (IFAS) Forest Jumpstart Program: "Influence of Fire Chronology on Soil and Water Characteristics in Florida Forests" (PI: A. Sharma; Co-PI: S. Grunwald; 2020-2021; $54,996)
- UF Mindfulness Program, funding provided by the UF Center for Spirituality and Health, Medical School (2017-2021; $10,000)
- UF Term Professorship (2017-2020; $15,000)
- UF Research Foundation Professorship (2017-2020; $3,000)
- UF-Creative Campus Program (PI: Grunwald; 2015-2016; $10,000)
- UF Faculty Enhancement Opportunity (FEO) Program (2012-2013; $12,252)
- UF Research Foundation Professorship (2010-2013; $3,000)
- McIntire Stennis funding (2012: $2,400; 2013: $2,000; 2015: $2,000)
- UF Soil and Water Sciences Department: Development of a Soil Resource Bank (2010; $10,000)
- UF Stimulus Funds: Alternative delivery and eLearning (2010-2011; $92,000. Grunwald's share: $45,000)
- UF College of Agriculture and Life Sciences (CALS) Minigrant distance delivery: Distance education labs through second life (2008; $1,500)

- UF-IFAS Research Innovation Funds: Linking terrestrial nutrients to red tide incidences in the Tampa Bay (PI: G. Toor; Co-PI: Grunwald; total budget: $49,912; Grunwald's share: $13,838)
- UF-CALS Minigrant for the Improvement of Instruction: Development of Reusable Learning Objects for spatial sciences (2005-2006; $3,000)
- UF-CALS Minigrant: Implement Breeze life online collaborative software in the Soil and Water Sciences Department (2005; $15,000)

Presentations

Overview Grunwald's Presentations at Conferences (status 2/2023)

Total number of presentations	**Total**	**Invited**	**Volunteered**
International	**129**	19	110
National	**172**	16	156
Regional	**32**	13	19
State	**16**	6	10
Local	**148**	39	109
Sum	**497**	**93**	**404**

Note: The American Society of Agronomy, Crop Science, and Soil Science (ASA-CSSA-SSSA Meetings) and American Geophysical Union (AGU) Meetings are listed under 'National Presentations'.

(A) International Presentations

Invited

1. Grunwald S. 2023. Data- and sensor-driven AI modeling of soil carbon from local to global scale, Soil Science Society of America – Soil Science Society of China Joint Webinar Series, Feb. 23, 2023.
2. Grunwald S. 2018. Soil ethics – Soil care, beliefs, and values. Division 4 "The Role of Soils in Sustaining Society and the Environment"; Commission 4.5 "History, Philosophy, and Sociology in Soil Science". International Union of Soil Science. 21st World Congress of Soil Science, Rio de Janeiro, Brazil, Aug. 12-17, 2018.
3. Grunwald S. 2017. Past, present and future of soil physical, chemical and biological process knowledge in Pedometrics. Pedometrics Conference, 25th Anniversary of Pedometrics Meeting, Wageningen, the Netherlands, June 26 – July 1, 2017. *Invited keynote talk*.
4. Grunwald S., B. Cao, C.W. Ross, R. Patarasuk and X. Xiong. 2015. Soil and terrestrial carbon space-time trajectories in the United States. International Association for Landscape Ecology World Congress, Portland, OR, July 5-10, 2015.
5. Grunwald S., P. Chaikaew, B. Cao, X. Xiong, G.M. Vasques, J. Kim, C.W. Ross, C.M. Clingensmith, Y. Xu and C. Gavilan. 2014. Integrative soil carbon modeling across various ecosystems and scales. The 6th Global Workshop on Digital Soil Mapping – Digital Soil Mapping Across Paradigms, Scales and Boundaries. Nanjing, China, Nov. 11-14, 2014.
6. Grunwald S. 2014. Soil carbon assessment from field to continental scale. International Potato Center (CIP), Lima, Peru, July 2-3, 2014.
7. Grunwald S. 2013. Global soil mapping in a changing world – keynote address. XXXIV Congresso Brasileiro de Ciêcia do solo (Brazilian Soil Science Congress), Florianópolis, Santa Catarina, Brazil, July 28 to Aug. 2, 2013.
8. Grunwald S. 2013. Distance Education in Soil, Agricultural and Environmental Sciences – Successes, Challenges, and Potentials. XXXIV Congresso Brasileiro de Ciêcia do solo (Brazilian Soil Science Congress), Florianópolis, Santa Catarina, Brazil, July 28 to Aug. 2, 2013.

9. Grunwald S. 2013. Digital soil mapping under the integral lens – A postdisciplinary approach conceptualizing a Meta Soil Model of the future. Faculty of Agriculture and Environment, University of Sydney, May 24, 2013.
10. Grunwald S. 2012. Quantitative soil-landscape analysis – analyzing the spatial distribution, variability, and behavior of soil carbon at continental and global scales. Soil Organic Carbon for Global Benefits: A Scoping Workshop for the Global Environmental Facility. Scientific and Technical Advisory Panel, United Nations Environmental Program, Nairobi, Kenya, Sept. 10-13, 2012.
11. Grunwald S. 2012. Modeling of flat, timeless and non-spatial soilscapes – paradox, simplicity, reality or illusion? Int. Conference on Hydropedology, Leipzig, Germany, July 22-27, 2012.
12. Grunwald S. 2012. Implications of different worldviews to assess soil organic carbon change. European Geosciences Union, Vienna, Austria, April 22-27, 2012. Invited keynote talk.
13. Grunwald S. 2010. Geospatial assessment of carbon dynamics in Florida, U.S. Seminar in the Faculty of Agriculture, Food & Natural Resources, University of Sydney, Australia. Dec. 15, 2010.
14. Grunwald S. 2009. Reusable learning objects and eLearning. Tamil Nadu Agricultural University, Coimbatore, India, July 21, 2009.
15. Grunwald S. 2009. GIS-based digital soil mapping. Tamil Nadu Agricultural University, Coimbatore, India, July 22, 2009.
16. Grunwald S. 2008. Multi-criteria assessment of digital soil modeling approaches. 3rd Global Conference on Digital Soil Mapping organized by the International Union of Soil Sciences, Soil Science Society of America and Utah State University, Logan, UT, Sept. 30-Oct. 3, 2008. Invited keynote talk. .
17. Tenywa M., A.W. Mwang'ombe, G. Kironchi, S. Grunwald, L. Staal, E. Hesse, F. Olubayo and B. Vanlauwe. 2007. Lessons from strengthening agricultural and environmental capacities using techmode: Partnership between Makerere University, University of Nairobi in East Africa, University of Florida and CIAT. Forum for Agricultural Research in Africa, Johannesburg, South Africa, June 10-16, 2007.
18. Tenywa M., A. Mwang'ombe, L. Staal, S. Grunwald, and E. Hesse. 2005. Strengthening agricultural and environmental capacities through distance education. Forum for Agricultural Research in Africa (FARA) General Assembly "Innovations to Transform Agriculture for Improved Livelihoods and Development in Africa", Entebbe, Uganda, June 6-12, 2005.
    Organization of a theme session (incl. presentations and discussion): new conceptual approach utilizing distance education to strengthen local capacities at African institutions of higher education.
19. Grunwald S., D.J. Rooney, K. McSweeney and B. Lowery. 1999. A new generation of soil landscape models. 10th Int. Soil Conservation (ISCO) Conference, West Lafayette, IN, May 23-28, 1999.

Volunteered

1. Jelinski N.A., C.W. Brungard, M.J. Maccander, S.L. Ives and S. Grunwald. 2023. Predictive mapping of soil properties beyond carbon: The Alaska Soil Data Bank Project. European Conference on Permafrost (EUCOP 2023), Puigcerdà Catalonia, Spain, June 18-22 June 2023.

2. Grunwald S. 2022. Assessment of carbon and climate smart practices through field data, sensors, and AI modeling in specialty crops. The Global Produce & Floral Show and Research Center launch of the International Food Produce Association, Orlando, FL, Oct. 27-29, 2022.
3. Brevik E.C., J. Homburg and S. Grunwald. 2022. Native American origin myths and potential links to modern culture. World Congress of Soil Science—Soil science: Crossing boundaries, changing society, Glasgow, Scotland, July 31 – Aug. 5, 2022.
4. Grunwald S. 2022. How mindfulness meditation practices impact how people relate to soils and nature: Traditional Buddhist and contemporary North American perspectives. World Congress of Soil Science—Soil science: Crossing boundaries, changing society, Glasgow, Scotland, July 31 – Aug. 5, 2022.
5. Grunwald S. 2022. Feminine psycho-spiritual-social constructs of nature, land, Earth, and soil. World Congress of Soil Science—Soil science: Crossing boundaries, changing society, Glasgow, Scotland, July 31 – Aug. 5, 2022.
6. Grunwald S. and K. Mizuta. 2022. Pedo-econometric assessment of the efficiencies of soil functions. World Congress of Soil Science—Soil science: Crossing boundaries, changing society, Glasgow, Scotland, July 31 – Aug. 5, 2022.
7. Patzel N., S. Grunwald, E.C. Brevik and C. Feller. 2022. Cultural understanding of soils: Results from an inter-cultural project. World Congress of Soil Science—Soil science: Crossing boundaries, changing society, Glasgow, Scotland, July 31 – Aug. 5, 2022.
8. Grunwald S. 2021. A pluralistic integral soil ethics (PISE) grounded in multifaceted soil care. Eurosoil 2021, Geneva, Switzerland, Aug. 23-28, 2021 (virtual conference due to COVID).
9. Grunwald S. 2021. Transpersonal and transcultural perspectives to achieve soil/land degradation neutrality. Eurosoil 2021, Geneva, Switzerland, Aug. 23-28, 2021 (virtual conference due to COVID).
10. Mizuta T., S. Grunwald, A.R. Bacon, and W. Jr. Cropper. 2021. Developmental history of soil concepts from the science perspective. Eurosoil 2021, Geneva, Switzerland, Aug. 23-28, 2021 (virtual conference due to COVID).
11. Brevik E.C., S. Grunwald, and J. Homburg. 2021. Native American origin myths including soil or Earth: Prehistory to present. Eurosoil 2021, Geneva, Switzerland, Aug. 23-28, 2021 (virtual conference due to COVID).
12. Mizuta T., S. Grunwald, M.A. Phillips, C.B. Moss, W.P. Cropper, and A.R. Bacon. 2020. Sensitivity analysis of metafrontier data envelopment analysis for assessing soil carbon sequestration efficiencies. North American Productivity Conference, Miami, FL, June 8-12, 2020.
13. Adi S.H., S. Grunwald, and C. Tafakresnanto. 2019. Fusing environmental variables into soil spectroscopy modeling using a novel two-step regression method. International Seminar and Congress of the Indonesian Soil Science Society (ISCO-ISS 2019), Bandung, West Java, Indonesia, Aug. 5-7, 2019.
14. Grunwald S., R.K. Kastner-Wilcox, C.M. Clingensmith, K. Mizuta, and C. Gavilan. 2018. The integral soil model to address local and global soil health and security. 21st World Congress of Soil Science, Rio de Janeiro, Brazil, Aug. 12-17, 2018.
15. Kastner-Wilcox R., S. Grunwald, M. Ardelt, and T. Irani. 2018. The integral soil model to address local and global soil health and security. 21st World Congress of Soil Science, Rio de Janeiro, Brazil, Aug. 12-17, 2018.
16. Adi S.H. and S. Grunwald. 2019. A novel latent variable approach for factorial modeling of soil carbon in Florida. Pedometrics 2019 Conference, Guelph, Ontario, Canada, June 2-6, 2019.

17. Adi S.H., S. Grunwald, S. Gerber, W.T. Bowen, and D. Valle. 2019. Soil information integration for agroecological intensification policy development in Indonesia. Pedometrics 2019 Conference, Guelph, Ontario, Canada, June 2-6, 2019.
18. Gavilan C., S. Grunwald, and R. Quiroz, 2019. Coupling of proximal soil sensing (VNIR) and a process-based model to understand SOC dynamics. Pedometrics 2019 Conference, Guelph, Ontario, Canada, June 2-6, 2019.
19. Mizuta T. S. Grunwald and M. Phillips. 2019. How to make sense of the plurality of soil carbon sequestration assessed with the data envelopment analysis indication system. Pedometrics 2019 Conference, Guelph, Ontario, Canada, June 2-6, 2019.
20. Grunwald S. 2019. Embodied liberation in participatory theory and *Vajrayāna* Buddhism. Association for Transpersonal Psychology 50th Anniversary Conference, April 12-14, 2019, Pacific Grove, CA.
21. Grunwald S. 2018. Exploration of somatic and cognitive meditation practices within the body-soteriological pathways model. Mind & Life Institute. International Symposium for Contemplative Research (ISCR), Nov. 8-11, 2018, Phoenix, AZ.
22. Grunwald S. 2018. Reconciliation of Buddhist notions and Western psychology in support of a whole person psychology. Mind & Life Institute. International Symposium for Contemplative Research (ISCR), Nov. 8-11, 2018, Phoenix, AZ.
23. Grunwald S., M. Ardelt, and A. Puig. *Mindfulness is not one but many*. International Mind & Life 2018 Summer Research Institute – "Engaging cultural difference and human diversity", Garrison Institute, NY, June 2-8, 2018.
24. Clingensmith C.M., S. Grunwald, S. Wani. 2017. Using new sparsity genomic methods to improve soil chemometric models. Pedometrics Conference, 25th Anniversary of Pedometrics Meeting, Wageningen, the Netherlands (June 26-July 1, 2017).
25. Clingensmith C.M., S. Grunwald, S. Wani. 2017. Transferring and spiking of soil spectral models between two south Indian villages. Pedometrics Conference, 25th Anniversary of Pedometrics Meeting, Wageningen, the Netherlands (June 26-July 1, 2017).
26. Mizuta K., S. Grunwald, W.P. Cropper, W. Lee, G.M. Vasques, M.A. Phillips, B.D. Myers, X. Xiong and W.G. Harris. A novel Pedometrics-econometrics approach to assess soil carbon capability. Pedometrics Conference, 25th Anniversary of Pedometrics Meeting, Wageningen, the Netherlands (June 26-July 1, 2017).
27. Mizuta K., S. Grunwald, C.M. Clingensmith, G.M. Vasques, W. Lee, M.A. Phillips, W.P. Cropper, X. Xiong and B.D. Myers. 2017. Modeling pedo-econometric carbon scores with VNIR spectroscopy. Pedometrics Conference, 25th Anniversary of Pedometrics Meeting, Wageningen, the Netherlands (June 26-July 1, 2017).
28. Vogel J., …. S. Grunwald, ……. 2017. Response of carbon accumulation in managed pine stands to different management strategies. European Geosciences Union General Assembly, Vienna, Austria (April 23-28, 2017).
29. Keskin H., S. Grunwald, D.B. Myers and W.G. Harris. 2016. Geospatial modeling of soil carbon fractions. Eurosoil, Instanbul, Turkey (Oct. 16-21, 2016).
30. Ceddia M.B., S. Grunwald, É.F.M. Pinheiro, K. Mizuta, C.M. Clingensmith and M.M. Fernandes. 2015. Applying the Meta Soil Model: The complexities of soil and water security in a Permanent Protection Area in Brazil. Global Soil Security Symposium, College Station, Texas A&M University, TX (May 19-21, 2015).
31. Grunwald S., K. Mizuta, M.B. Ceddia, É.F.M. Pinheiro, R. Kay Kastner-Wilcox, C.P. Gavilan, C.W. Ross and C.M. Clingensmith. 2015. The Meta Soil Model: An Integrative Multi-Model Framework for Soil Security. Global Soil Security Symposium, College Station, Texas A&M University, TX (May 19-21, 2015).

32. Grunwald S. C.M. Clingensmith, C.P. Gavilan, K. Mizuta, R. Kay Kastner Wilcox, É. F.M. Pinheiro, M.B. Ceddia and C.W. Ross. 2015. Integrating New Perspectives to Address Global Soil Security: Ideas from Integral Ecology. Global Soil Security Symposium, College Station, Texas A&M University, TX (May 19-21, 2015).
33. Chaikaew P., S. Grunwald, S.H. Daroub, T.A. Martin, H.W. Beck and A.W. Hodges. 2015. A multi-perspectival approach for integrative assessment of ecosystem services using Bayesian Belief Networks. International Association for Landscape Ecology World Congress, Portland, OR, July 5-10, 2015.
34. Chaikaew P., S. Grunwald and X. Xiong. 2014. Estimation of the actual and attainable terrestrial carbon budget. The 6th Global Workshop on Digital Soil Mapping – Digital Soil Mapping Across Paradigms, Scales and Boundaries. Nanjing, China, Nov. 11-14, 2014.
35. Peng Y., X. Xiong, K. Adhikari, M. Knadel, S. Grunwald and M. Humlekrog Greve. 2014. Modeling top SOC by combining multi-spectral images with laboratory spectra. The 6th Global Workshop on Digital Soil Mapping – Digital Soil Mapping Across Paradigms, Scales and Boundaries. Nanjing, China, Nov. 11-14, 2014.
36. Xiong X., S. Grunwald, E.C. Benham, B. Cao, M. Fajardo, R.R. Ferguson, J.W. Hempel, D. Hoover, T. Loecke, A.B. McBratney, B. Minasny, R. Patarasuk, C.W. Ross, L.T. West and S.G. Wills. 2014. 3D geospatial modeling of soil organic carbon with uncertainty analysis for the conterminous U.S. The 6th Global Workshop on Digital Soil Mapping – Digital Soil Mapping Across Paradigms, Scales and Boundaries. Nanjing, China, Nov. 11-14, 2014.
37. Yu C., S. Grunwald and X. Xiong. 2014. Transferability and scaling of VNIR prediction models for soil total carbon in Florida. The 6th Global Workshop on Digital Soil Mapping – Digital Soil Mapping Across Paradigms, Scales and Boundaries. Nanjing, China, Nov. 11-14, 2014.
38. Zhang B. and S. Grunwald. 2014. Spatial assessment of soil organic carbon using Bayesian maximum entropy and partial least square regression models. The 6th Global Workshop on Digital Soil Mapping – Digital Soil Mapping Across Paradigms, Scales and Boundaries. Nanjing, China, Nov. 11-14, 2014.
39. Grunwald S., X. Xiong, B. Cao, A.B. McBratney, B. Minasny, C.W. Ross and R. Patarasuk. 2014. Modeling of soil carbon variability and trajectories across the conterminous U.S. World Congress of Soil Science, Jeju, Korea, June 9-13, 2014. (oral)
40. Grunwald S. 2014. Pathways towards an integral-informed soil meta model. World Congress of Soil Science, Jeju, Korea, June 9-13, 2014. (poster)
41. Kim J., S. Grunwald and R.G. Rivero. 2014. Evaluating total carbon stocks using satellite images in a subtropical wetland: the Everglades, Florida, U.S. World Congress of Soil Science, Jeju, Korea, June 9-13, 2014. (oral)
42. Xiong X., S. Grunwald, D.B. Myers, J. Kim, W.G. Harris, N.B. Comerford and N. Bliznyuk. 2014. Bayesian geostatistical modeling of soil organic carbon with uncertainty analysis across a highly heterogeneous landscape. World Congress of Soil Science, Jeju, Korea, June 9-13, 2014. (oral)
43. Xiong X., S. Grunwald, D.B. Myers, W.G. Harris and N.B. Comerford. 2014. Soil carbon sequestration in the carbon richest region in the conterminous USA. World Congress of Soil Science, Jeju, Korea, June 9-13, 2014. (oral)
44. Grunwald S. 2013. Conceptualization of a Meta Soil Model, p. 6. Global Soil Map Conference, Orleans, France, Oct. 7-11, 2013.
45. Grunwald S., B. Cao, X. Xiong, C.W. Ross, R. Patarasuk, J. Hempel, L.T. West, S.S. Andrews, S. Wills and T.D. Loecke. Part II – Integration of data to work towards a Meta Soil Carbon Model in the U.S., p. 6. Global Soil Map Conference, Orleans, France, Oct. 7-11, 2013.

46. Wills S., T. Loecke, C. Sequiera, S. Grunwald, L. West, R. Ferguson, E. Benham, K. Scheffe, G. Teachman. 2013. Rapid soil mapping of the U.S.: Initial summary. IUSS Global Soil Carbon Conference, Madison, WI, USA, June 3-6, 2013.
47. McBratney A.B., R. Lal, B. Parton, J. Jastrow, D. Angers, C. Chenu, J. Lehman, K. Goulding, D. Whitehead, M. Zimmerman, A. O'Donnell, C. Flora, S. Grunwald, C.L. Morgan, C. Rice, J. Hempel, D. Wall, and K. Lorenz. 2012. Responding to the global soil crisis. Rio+ United Nations Conference on Sustainability. Rio De Janeiro, Brazil, June 20-22, 2012.
48. Cao B., S. Grunwald and X. Xiong. 2012. Cross-regional digital soil carbon modeling considering scaling effects for soil carbon assessment at global scale. The 5th Global Workshop on Digital Soil Mapping 2012, Sydney, Australia, April 10-13, 2012.
49. Grunwald S., J.A. Thompson, B. Minasny and J.L. Boettinger. 2012. Digital soil mapping in a changing world. The 5th Global Workshop on Digital Soil Mapping 2012, Sydney, Australia, April 10-13, 2012.
50. Kim J., S. Grunwald, T.Z. Osborne, R.G. Rivero, R. Robbins and H. Yamataki. 2012. Spatial resolution effects of remote sensing images on digital soil models in aquatic ecosystems. The 5th Global Workshop on Digital Soil Mapping 2012, Sydney, Australia, April 10-13, 2012.
51. Xiong X., S. Grunwald, D.B. Myers, J. Kim, W.G. Harris and N.B. Comerford. 2012. Which soil, environmental and anthropogenic covariates for soil carbon models in Florida are needed? The 5th Global Workshop on Digital Soil Mapping 2012, Sydney, Australia, April 10-13, 2012.
52. Grunwald S. and G.M. Vasques. 2010. Synthesis of knowledge on soil carbon spatial patterns across a large subtropical soil-landscape in southern U.S. World Congress of Soil Science, Brisbane, Australia, Aug. 2-6, 2010.
53. Myers D.B., S. Grunwald, N.B. Comerford and W.G. Harris. 2010. Digital mapping of soil carbon fractions for regional assessment of soil carbon spatial variability in Florida, USA. Int. Workshop on Digital Soil Mapping, Rome, Italy, May 24-26, 2010.
54. Vasques G.M., S. Grunwald and D.B. Myers. 2010. Search for a multiscale soil organic carbon spatial model in Florida. Part I: Influence of extent, resolution, and geographic region. Int. Workshop on Digital Soil Mapping, Rome, Italy, May 24-26, 2010.
55. Vasques G.M., S. Grunwald and D.B. Myers. 2010. Search for a multiscale soil organic carbon spatial model in Florida. Part II: Spatial dependence of soil-landscape relationships. Int. Workshop on Digital Soil Mapping, Rome, Italy, May 24-26, 2010.
56. Reddy K.R., S. Grunwald and B. Hoover. 2008. Application of innovative e-technologies for distance education: University of Florida experience. Int. Conference on Research & Educational Opportunities in Biofuel Crop Production, Earth University, Guácimo, Limón, Costa Rica, Nov. 17-19, 2008.
57. Grunwald S., G.M. Vasques, N.B. Comerford, G.L. Bruland, C.M. Bliss and J.O. Sickman. 2008. Biogeochemical soil-landscape modeling. 3rd Global Workshop on Digital Soil Mapping organized by the International Union of Soil Sciences, Soil Science Society of America and Utah State University, Logan, UT, Sept. 30-Oct. 3, 2008.
58. McKay Philippe J., S. Grunwald, X. Shi and R. Long. 2008. Evaluation of the transferability of a knowledge-based soil-landscape model. 3rd Global Workshop on Digital Soil Mapping organized by the International Union of Soil Sciences, Soil Science Society of America and Utah State University, Logan, UT, Sept. 30-Oct. 3, 2008.
59. Vasques G.M. and S. Grunwald. 2008. Soil organic carbon estimation from lab-based spectroscopy in the State of Florida. 3rd Global Workshop on Digital Soil Mapping organized by the International Union of Soil Sciences, Soil Science Society of America and Utah State University, Logan, UT, Sept. 30-Oct. 3, 2008.

60. Myers D.B., N.R. Kitchen, R.J. Miles, K.R. Sudduth, E.J. Sadler and S. Grunwald. 2008. Multi-sensor estimation of claypan soil profile properties. 9th Int. Conference on Precision Agriculture, Denver, CO, July 20-23, 2008.
Graduate student D. B. Myers was awarded student award for his presentation
61. Grunwald S. and B. Hoover. 2007. Assessment of barriers and usage of computer-mediated communication and learning tools in a Distance Education M.S. Program in environmental Sciences. Sloan-C Conference on Online Learning, Orlando, FL, Nov. 7-9, 2007.
62. Grunwald S., K.R. Reddy and V. Balaji. 2007. Reusable e-Learning materials for water management: Indo-US partnership under the Agricultural Knowledge Initiative. Sloan-C Conference on Online Learning, Orlando, FL, Nov. 7-9, 2007.
63. Vasques G.M., S. Grunwald and J.O. Sickman. 2007. Assessment of total soil carbon and carbon fractions at the watershed scale using geospatial upscaling techniques. International Pedometrics 2007 meeting, Tübingen, Germany, Aug. 27-31, 2007.
64. Grunwald S., G.M. Vasques and J.O. Sickman. 2007. Spectral signatures for soil carbon: Assessment of total, recalcitrant, hydrolysable and dissolved organic fractions. International Pedometrics 2007 meeting, Tübingen, Germany, Aug. 27-31, 2007.
65. Grunwald S., K.R. Reddy and T.Z. Osborne. 2007. How to translate biogeochemical models into spatially-explicit context - a case study from the Greater Everglades. 10th International Symposium on Wetland Biogeochemistry - Frontiers in Biogeochemistry. Annapolis, Maryland, April 1-4, 2007.
66. Rivero R.G., S. Grunwald and K.R. Ramesh. 2007. Development of predictive models of soil phosphorus in Water Conservation Area-2A (Everglades, Florida, USA) integrating GIS, remote sensing and geostatistics. 10th International Symposium on Wetland Biogeochemistry - Frontiers in Biogeochemistry. Annapolis, Maryland, April 1-4, 2007.
67. Grunwald S. 2007. E-delivery methods of learning materials. Indo-US Workshop on Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.
68. Grunwald S. 2007. Reusable Learning Objects. Indo-US Workshop on Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.
69. Grunwald S. 2007. Geographic Information Systems - Water Management. Indo-US Workshop on Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.
70. Grunwald S. and S. Daroub. 2007. E-learning tools and distance education. Indo-US Workshop on Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management, Patancheru/Hyderabad, India, March 5-9, 2007.
71. Grunwald S., G.W. Hurt, G.L. Bruland and N.B. Comerford. 2006. SCORPAN-based soil-landscape modeling in north-east Florida. World Congress of Soil Science - Frontiers of Soil Science, Philadelphia, Pennsylvania, July 9-15, 2006.
72. Vasques G.M., S. Grunwald and J.O. Sickman. 2006. Assessment of total, stable and labile carbon using visible, near-infrared diffuse reflectance spectroscopy. World Congress of Soil Science - Frontiers of Soil Science, Philadelphia, Pennsylvania, July 9-15, 2006.
73. Bruland G.L., T.Z. Osborne, K.R. Reddy, S. Grunwald, S. Newman and W.F. DeBusk. 2006. Space-time trajectories of soil total phosphorus in a large subtropical wetland. World Congress of Soil Science - Frontiers of Soil Science, Philadelphia, Pennsylvania, July 9-15, 2006.

74. Cohen M., S. Grunwald, K.R. Reddy and M.W. Clark. 2006. Soil spectral sensing in the Everglades. World Congress of Soil Science - Frontiers of Soil Science, Philadelphia, Pennsylvania, July 9-15, 2006.
75. Beck H.W., K.T. Morgan, J.M.S. Scholberg and S. Grunwald. 2006. Implementation of in-season irrigation and nutrient yools for minimizing environmental impacts of citrus and sugarcane production. World Congress on Computers in Agriculture, Orlando, FL, July 24-26, 2006.
76. Morgan K.T., H.W. Beck, J.M.S. Scholberg and S. Grunwald. 2006. In-season irrigation and nutrient decision suport system for citrus production. World Congress on Computers in Agriculture, Orlando, FL, July 24-26, 2006.
77. Reddy K.R. and S. Grunwald. 2005. Distance learning experience in agriculture. Workshop "The Use of Learning Management Systems for TechMode Partners". Hyderabad, India, Dec. 6-10, 2005.
78. Chen S.-S. and S. Grunwald. 2005. The spatial/temporal indexing and information visualization genre for environmental digital libraries. 10 p.; ID #178. Int. Conference on Universal Digital Library (ICUDL2005), Zhejiang University, Hangzhou, China, Oct. 31 - Nov. 1-2, 2005.
79. Grunwald S., G.L. Bruland and P. Goovaerts. 2005. Independent validation of soil predictions - the act of testing the truth? Pedometrics 2005 - International Meeting of Commission 1.5 of the Int. Union of Soil Sciences. Naples, Florida, Sept. 12-14, 2005.
80. Lamsal S., S. Grunwald, G.L. Bruland, C.M. Bliss, and N.B. Comerford. 2005. Modeling of regional soil nitrate-nitrogen patterns using a mixed geospatial modeling approach. Pedometrics 2005 - International Meeting of Commission 1.5 of the Int. Union of Soil Sciences. Naples, Florida, Sept. 12-14, 2005.
Graduate student Sanjay Lamsal ranked 2nd in the student award competition.
81. Bruland G.L., S. Grunwald, K.R. Reddy, T.Z. Osborne and S. Newman. 2005. A spatially-explicit Mantel test framework to investigate relationships among soil, water, landscape and vegetative properties. Pedometrics 2005 - International Meeting of Commission 1.5 of the Int. Union of Soil Sciences. Naples, Florida, Sept. 12-14, 2005.
82. Rivero R.G., S. Grunwald, S. Newman, T.Z. Osborne and K.R. Reddy. 2005. Incorporation of ASTER satellite imagery into multi-variate geostatistical models to predict soil phosphorus. Pedometrics 2005 - International Meeting of Commission 1.5 of the Int. Union of Soil Sciences. Naples, Florida, Sept. 12-14, 2005.
Graduate student Rosanna Rivero ranked 3nd in the student award competition.
83. Corstanje R., R.M. Lark and S. Grunwald. 2005. To detect the breakdown of assumptions of statistical stationarity in the soil variation of a complex landscape. Pedometrics 2005 - International Meeting of Commission 1.5 of the Int. Union of Soil Sciences. Naples, Florida, Sept. 12-14, 2005.
84. Grunwald S. and G.L. Bruland. 2005. Expanding distance education in the spatial sciences. International Conference on Education and Information Systems: Technologies & Applications, Orlando, FL, July 14-17, 2005.
Best paper in the session "Internet-Based Teaching / Distance Learning" (Professor Freddy Malpica, EISTA 2005 General Chair).
85. van Griensven A., T. Meixner, S. Grunwald and R. Srinivasan. 2005. Evaluation methods for SWAT models. SWAT 3rd Int. Conference, Zuerich, Switzerland, July 11-15, 2005.
86. Grunwald S., R. Corstanje, G.L. Bruland, T.Z. Osborne, R.G. Rivero, S. Newman and K.R. Reddy. 2005. Geospatial mapping of soil total phosphorus in the Greater Everglades

ecosystem. 9th Int. Symposium on Biogeochemistry of Wetlands. Baton Rouge, LA, March 20-23, 2005.

87. Bruland G.L., S. Grunwald, T.Z. Osborne, K.R. Reddy and S. Newman. 2005. Geostatistical analyses of soils data from Water Conservation Area 3, south Florida. 9th Int. Symposium on Biogeochemistry of Wetlands. Baton Rouge, LA, March 20-23, 2005.
88. Bohlen P.J., S. Gathumbi, K.A. McKee, M.W. Clark and S. Grunwald. 2005. Strategic restoration of wetlands on private lands: regional approaches in the Lake Okeechobee Watershed. 9th Int. Symposium on Biogeochemistry of Wetlands. Baton Rouge, LA, March 20-23, 2005.
89. Grunwald S., G.L. Bruland, R. Corstanje, R.G. Rivero, K.R. Reddy, T.Z. Osborne and S. Newman. 2005. Geostatistical modeling of soil property variability within the Greater Everglades ecosystem. 20th Annual Symposium of the U.S. Regional Chapter of the Int. Association for Landscape Ecology, Syracuse, NY, March 12-16, 2005.
90. Grunwald S., V. Ramasundaram, N.B. Comerford and C.M. Bliss. 2004. How realistic are our translations of real soil-landscapes and ecosystem processes? Global Workshop on Digital Soil Mapping, Montpellier, France, Sept. 14-17, 2004.
91. Grunwald S. and K.R. Reddy. 2004. Characterization of the nutrient-status in a subtropical wetland. Int. Eurosoil Meeting, Freiburg, Germany, Sept. 4-12, 2004.
92. Ramasundaram V., S. Grunwald, N.B. Comerford and C.M. Bliss. 2004. Quantitative reconstruction and scientific visualization of a flatwood soil-landscape. Int. Eurosoil Meeting, Freiburg, Germany, Sept. 4-12, 2004.
93. McKee K.A., S. Grunwald, M.W. Clark and S. Newman. 2004. Predicting phosphorus in isolated agricultural wetlands using GIS, remote sensing and classification trees. Int. Society of Wetland Scientists, Seattle, WA, July 18-23, 2004.
94. Grunwald S., K.R. Reddy and J.P. Prenger. 2004. Characterization of the spatial and parameter variability in a subtropical wetland. Int. Environmetrics Society & Symposium on Spatial Accuracy Assessment, Portland, ME, June 28-July 1, 2004.
95. Grunwald S., J.P. Prenger and K.R. Reddy. 2003. Spatial modeling of soil properties in a Florida wetland. Eight Int. Symposium on Biogeochemistry of Wetlands, Ghent, Belgium, Sept. 14-17, 2003.
96. Grunwald S., J.P. Prenger, M.M. Fisher and K.R. Reddy. 2003. Spatial methods to assess the distribution and impact of soil phosphorus in a subtropical wetland. Int. Pedometrics 2003 Meeting, Reading, UK, Sept. 11-12, 2003.
97. Grunwald S. 2003. Space-time modeling and visualization of water table dynamics in a flatwood landscape. Paper No. 033064. ASAE Annual Int. Meeting, Las Vegas, NV, July 20-23, 2003.
98. Grunwald S. and T.F.A. Bishop. 2003. Modeling water quality in the Sandusky Watershed, Ohio. Paper No. 032058. ASAE Annual Int. Meeting, Las Vegas, NV, July 20-23, 2003.
99. Grunwald S. and K.R. Reddy. 2003. Florida's wetland webGIS. ESRI Int. User Conference, San Diego, CA, July 8-13, 2003.
100. Bishop T.F.A. and S. Grunwald. 2003. Modeling water quality in the Sandusky Watershed, Ohio. ESRI Int. User Conference, San Diego, CA, July 8-13, 2003.
101. Grunwald S. 2003. 3D geographic information technology used for site-specific agricultural management. 4th European Conference on Precision Agriculture (ECPA), Berlin, Germany, June 15-18, 2003.

102. Grunwald S. 2002. Geographic information technology applied to land resource management. Paper No. 023030. ASAE Int. Meeting / CIGR World Congress, Chicago, IL, July 29-31, 2002.

103. Grunwald S., P. Barak and D.J. Rooney. 2001. Web-based virtual models for the earth science community. Paper No. 013029. ASAE Int. Meeting, Sacramento, CA, July 29-Aug. 1, 2001.

104. Grunwald S. and P. Barak. 2001. Virtual reality modeling in earth sciences. Int. Western MultiConference - Virtual Worlds and Simulation. Society for Computer Simulation International (SCS), Phoenix, AZ, Jan. 7-11, 2001.

105. Grunwald S., P. Barak, K. McSweeney, B. Lowery and P.J. Fagan. 2000. Soil landscape models at different scales portrayed in Virtual Reality Modeling Language (VRML). Int. WesternMulti Conference - Environmental Modeling and Simulation, The Society for Computer Simulation International (SCS), San Diego, CA, Jan.23-27, 2000.

106. Grunwald S., D.J. Rooney, K. McSweeney and B. Lowery. 1999. Application of a profile cone penetrometer to distinguish between soil materials. 3rd Conference of the Working Group on Pedometrics of the Int. Union of Soil Sciences, Sydney, Australia, Sept. 27-29, 1999.

107. Grunwald S. 1997. AGNPS (Agricultural Non-Point Source Pollution Model) Part I. Int. Workshop "Experiences with Soil Erosion Models", Prague, Czech Republic, Oct. 6-8, 1997.

108. Grunwald S. 1997. Application of AGNPSm in German Watersheds Part II. Int. Workshop "Experiences with Soil Erosion Models", Prague, Czech Republic, Oct. 6-8, 1997.

109. Chaubey I., C.T. Haan, J.M. Salisbury and S. Grunwald. 1997. Effect of spatial variability of rainfall on modeling hydrologic/water quality processes. ASAE Annual Int. Meeting, Minneapolis, MN, Aug. 10-14, 1997, Paper No. 972099.

110. Grunwald S. and H.-G. Frede. 1996: GIS based modeling of water flux and nutrients utilizing grid-based AGNPS. Vol. 24: 231-236. AGIT-Symposium, Salzburg, Austria, July 3-5, 1996.

(B) National Presentations

Invited

1. Grunwald S., X. Xiong, M. Fajardo Pedraza, B. Minasny, A.B. McBratney, B. Cao, C.W. Ross and R. Patarasuk. 2014. Climate change impacts on soil carbon along ecological trajectories at continental scale (U.S.). ASA-CSSA-SSSA Int. Annual Meeting, Long Beach, CA, Nov. 3-5, 2014.
2. Rivero R.G., G.M. Vasques and S. Grunwald. 2013. Fusion of soil and remote sensing in support of digital soil modeling. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
3. Grunwald S. and B. Hoover. 2011. Barriers and opportunities in soil, water and environmental sciences online education No. 285-2. Symposia Wetland Soils Education, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
4. Vasques G.M., S. Grunwald, D.B. Myers, N.B. Comerford, J.O. Sickman and W.G. Harris. 2011. Modeling Soil Carbon in a Hydrologically Complex Region: Lessons Learned in Florida No. 259-3. Symposia Spatial Predictions in Soils, Crops and Agro/Forest/Urban/Wetland Ecosystems, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
5. Kim J., S. Grunwald, T.Z. Osborne, and R. Robins. 2011. Remote-sensing supported digital soil mapping in south Florida. National Soil Survey Cooperative Meeting, Asheville, NC, May 22-25, 2011.

6. Grunwald S. 2011. Geospatial and spectral soil carbon modeling across large regions. NRCS, National Soil Survey Center (NSSC), Lincoln, NE, May 13, 2011.
7. Grunwald S., G.M. Vasques, D.B. Myers, W.G. Harris, N.B. Comerford, and G.L. Bruland. 2011. Spatially-explicit and spectral soil carbon modeling in Florida. University of Hawaii, Honolulu, HI, April 25, 2011.
8. Grunwald S. 2011. Distance education in soil, water and environmental sciences – success stories and lessons learned. University of Hawaii, Honolulu, HI, April 25, 2011.
9. Grunwald S., G.M. Vasques, D.B. Myers, W.G. Harris, N.B. Comerford, and G.L. Bruland. 2010. Change in Soil Organic Carbon Patterns across a Large Mixed-Use Landscape in the South-Eastern U.S.; ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
10. Grunwald S. 2008. Strategies for disaggregating soil patterns in a soil-landscape. Joint Meeting ASA-CSSA-SSSA and Geological Society of America Meeting, Houston, TX, Oct. 5-9, 2008.
11. Grunwald S., G.L. Bruland, R. Corstanje, R.G. Rivero, P. Goovaerts and K.R. Reddy. 2008. Landscape models for spatial upscaling of biogeochemical parameters. Symposium on Biogeochemistry and Water Quality of the Greater Everglades: Fate and Transport of Nutrients and Other Contaminants – Greater Everglades Ecosystem Restoration Conference, Naples, FL, July 28-Aug. 1, 2008.
12. Grunwald S. 2008. Barriers and usage of online communication and learning tools in a distance education M.S. program in environmental sciences. Columbus, OH, April 3, 2008.
13. Grunwald S., G.M. Vasques, J.O. Sickman, N.B. Comerford. 2007. Soil spectroscopy for rapid and cost-effective soil mapping across larger landscapes. National Cooperative Soil Survey Conference, Madison, WI, June 3-8, 2007.
14. Grunwald S., G.B.M. Heuvelink and K.R. Reddy. 2004. Spatio-temporal modeling of wetland properties and processes. American Society of Limnology and Oceanography (ASLO) Meeting, Savannah, GA, June 13-18, 2004.
15. Grunwald S. 2003. The promises and limitations of quantitative soil-landscape modeling. Seminar presentation at Lehigh University, Department of Earth and Environmental Sciences, Bethlehem, PA, April 22, 2003.
16. Grunwald S. 2001. Reconstructed virtual soil landscapes. National State Soil Scientist Meeting, Natural Resources Conservation Service (NRCS), Lawrence, KS, March 19-23, 2001.

Volunteered

1. Lu Y., Y.-C. Wang, S. Grunwald, and S.L. Chu. 2022. Videography facilitated nature-based mindfulness at natural destinations: Perspective of the attention restoration theory. Graduate Education & Graduate Student Research Conference in Hospitality & Tourism, Cal Poly Pomona, CA, Jan. 6-7, 2023. *The proceeding paper was nominated for Best Paper Award among 300 submitted papers*.
2. Zhou J., M.J. Deitch, S. Grunwald, E.J. Screaton and M. Olabarrieta. 2022. Effect of Mississippi River discharge and local hydrological variables on salinity of nearby estuaries using a machine learning algorithm, Joint Aquatic Sciences Meeting (JASM), Grand Rapids, MI, May 14-20, 2022.
3. Pachón J.C., S. Grunwald, J.G. Vogel, E.J. Jokela, C.W. Ross, R. Bracho, T.A. Martin, M. Laviner and A.R. Bacon. 2021. Soil microstructure is an emergent property of soils at regional scale appropriately studied at the map unit level. ASA-CSSA-SSSA Int. Annual Meeting, Baltimore, MD, Nov. 6-9, 2021.
4. Horst-Heinen T.Z., R.S.D. Dalmolin, S. Grunwald, A. Samuel-Rosa and J.M. Moura-Bueno. 2020. The decisive role of analytical methods of soil organic carbon predictions by Vis-NIR. Virtual ASA-CSSA-SSSA Int. Annual Meeting, Phoenix, AZ, Nov. 9-13. 2020.

5. Patzel N., E.C. Brevik, S. Grunwald and C. Feller. 2020. Soils and culture: Documenting the links. Virtual ASA-CSSA-SSSA Int. Annual Meeting, Phoenix, AZ, Nov. 9-13. 2020.
6. Zhou J., M. Deitch and S. Grunwald. 2019. Decadal variation of water level and salinity of the Apalachicola Bay, Florida. Coastal Estuaries Resilience Conference (CERF), Mobile, AL, Nov. 3-7, 2019.
7. Mizuta K., S. Grunwald, and M.A. Phillips. 2019. Introduction to pedo-econometrics. ASA-CSSA-SSSA Int. Annual Meeting, San Diego, CA, Jan. 6-9, 2019.
8. Mizuta K., M.A. Phillips, and S. Grunwald. 2019. Econometric case study to compute the capability of soil carbon sequestration in Florida. ASA-CSSA-SSSA Int. Annual Meeting, San Diego, CA, Jan. 6-9, 2019.
9. Gavilan C., S. Grunwald, and R. Quiroz. 2017. Soil organic carbon variability in high-Andean ecosystems: Bringing together machine learning and proximal sensing. . American Geophysical Union (AGU) Meeting, New Orleans, LA, Dec. 11-16, 2017.
10. Clingensmith C.M., S. Grunwald and S.P. Wani. 2017. Effects of calibration subsetting on spectral prediction of soil properties. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Oct. 22-25, 2017.
11. Gavilan C., S. Grunwald and R. Quiroz. 2017. Digital mapping of soil organic carbon stocks at regional scale: An Application in the Peruvian Central Andes. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Oct. 22-25, 2017.
12. Gavilan C., S. Grunwald and R. Quiroz. 2017. Assessing soil organic carbon content in the Peruvian Central Andes using visible/near-infrared (VNIR) and mid-infrared (MIR) spectroscopy. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Oct. 22-25, 2017.
13. Grunwald S., R.K. Kastner-Wilcox, C. Gavilan, K. Mizuta and C.M. Clingensmith. 2017. Facts, data and people's beliefs – An integral model to address soil health and security. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Oct. 22-25, 2017.
14. Grunwald S., C.M. Clingensmith, R.K. Kastner-Wilcox, K. Mizuta and C. Gavilan. 2017. The integral soil model in support of global soil health and security. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Oct. 22-25, 2017.
15. Setyono H.A., S. Grunwald, W.G. Harris, and D.B. Myers. 2017. Multi-response modeling for soil visible/near-infrared reflectance pattern prediction. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Oct. 22-25, 2017.
16. Vogel J., E.J. Jokela, S. Grunwald, A. Bacon, R. Bracho-Garrillo, T.A. Martin, M.B. Kane, A. Laviner, Burkhart, W. Rodney, D. Markewitz, C. Meek, C.A. Gonzalez-Benecke, W.C. Ross. 2016. The response of ecosystem carbon pools to management approaches in loblolly pine (*Pinus taeda* L.) plantations. American Geophysical Union (AGU) Meeting, San Francisco, CA, Dec. 12-16, 2016.
17. Mizuta K. and S. Grunwald. 2016. Lessons from econometric theory to develop novel indication systems for soil quality, soil health and soil security. ASA-CSSA-SSSA Int. Annual Meeting, Phoenix, AZ, Nov. 6-9, 2016.
18. Grunwald S., M. Ardelt, A. Puig, N.J. Lasseter, L.A. Ritz, N.F. (May) Dolen, F. Lewis, J. Snyder, T. Drake, T. Tannen, M. Murphy, A. Brown, K. Holton, E. Turner and A. S. Lindner. 2016. Embracing mindfulness – breath-by-breath – at the University of Florida". Contemplative Practices for the 21st Century University Conference, Blacksburg, VA, March 10-12, 2016.
19. Bacon A., K. Akers, J. Cuccinella, S. Grunwald, E. Jokela, D. Markewitz, A. Laviner, J. Vogel, T.A. Martin, T. Fox, M. Kane and G. Peter. 2015. The implications of using USDA-NCSS derived bulk density to estimate forest soil carbon stocks across the southeastern United States. American Geophysical Union, San Francisco, CA, Dec. 14-18, 2015.

20. Ross C.W., S. Grunwald, S. Del Grosso, S. Gerber, E. Jokela, A. Bacon, J. Cucinella, K. Akers, M.A. Laviner, J. Vogel, D. Markewitz, R. Bracho, H. Burkhart, J.M. Davis, T.D. Fox, C.A. Gonzalez-Benecke, M. Kane, G.F. Peter, A. Maggard and T. Martin. 2015. Region-wide assessment of soil carbon across "the land of the pines. American Geophysical Union, San Francisco, CA, Dec. 14-18, 2015.
21. Xu Y., S. Grunwald, C.M. Clingensmith, Abd-Elrahman, S.E. Smith and S.P. Wani. 2015. Spatial resolution effects of remote-sensing informed soil nutrient models based on Landsat 8, RapidEye, WorldView-2 and GeoEye-1 images. American Geophysical Union, San Francisco, CA, Dec. 14-18, 2015.
22. Keskin H., S. Grunwald, D.B. Myers and W.G. Harris. 2015. Regional scale assessment of soil carbon fractions with pedometrics. American Geophysical Union, San Francisco, CA, Dec. 14-18, 2015.
23. Cao B., S. Grunwald, H.J. Ferguson and J.W. Hempel. 2014. Soil organic carbon stock changes in the contiguous United States from 1920s to 2010s. American Geophysical Union Meeting, San Francisco, CA, Dec. 15-19, 2014.
24. Clingensmith C.M., S. Grunwald and S. Wani. 2014. Transferability of visible/near-infrared diffuse reflectance spectroscopic models of critical soil fertility properties between two small-holder agricultural villages in southern India. ASA-CSSA-SSSA Int. Annual Meeting, Long Beach, CA, Nov. 3-5, 2014.
25. Clingensmith C.M. and S. Grunwald. 2014. Uncertainty assessment of soil property estimations and spatial soil models using high-resolution VIS-NIR (diffuse reflectance) spectra. ASA-CSSA-SSSA Int. Annual Meeting, Long Beach, CA, Nov. 3-5, 2014.
26. Chaikaew P., S. Grunwald and X. Xiong. 2014. Modeling actual and attainable soil and terrestrial carbon. ASA-CSSA-SSSA Int. Annual Meeting, Long Beach, CA, Nov. 3-5, 2014.
27. Chaikaew P., S. Grunwald, S. Daroub, T.A. Martin, H.W. Beck A.W. Hodges. 2014. Synthesis of ecosystem service values based on biophysical, ecological, and socio-economic perspectives. ASA-CSSA-SSSA Int. Annual Meeting, Long Beach, CA, Nov. 3-5, 2014.
28. Xiong X. and S. Grunwald. 2014. Menace or opportunity? - Uncertainty in digital soil mapping and modelling. ASA-CSSA-SSSA Int. Annual Meeting, Long Beach, CA, Nov. 3-5, 2014.
29. Vogel J.G., D. Markewitz, H. Burkhart, R. Amateis, M. Laviner, E. Jokela, S.Grunwald, G. Sun, A. Noormets, M. Akers, B. Strahm, A. Bacon, T. Fox, C. Gonzalez, M. Kane, J. West, R. Will, D. Wilson and L. Samuelson. 2014. The Carbon measurement protocol of the Pine Integrated Network: Education, Mitigation, and Adaptation Project (PINEMAP). Society of American Foresters, Salt Lake City, UT, Oct. 5-11, 2014.
30. Grunwald S. (PD) 2014. Rapid assessment and trajectory modeling of changes in soil carbon across a southeastern landscape. NIFA-USDA Climate Change Project Director meeting. Gainesville, FL, Jan. 6-9, 2014.
31. Grunwald S. (PD) 2014. Assessment of climate regulation, carbon sequestration and nutrient cycling ecosystem services impacted by multiple stressors. NIFA-USDA Climate Change Project Director meeting. Gainesville, FL, Jan. 6-9, 2014.
32. Grunwald S. (PD) 2014. Modeling the effects of climate change on terrestrial carbon pools across the U.S. NIFA-USDA Climate Change Project Director meeting. Gainesville, FL, Jan. 6-9, 2014.
33. Cao B., S. Grunwald, R. Patarasuk, X. Xiong and C.W. Ross. 2013. Soil carbon modeling across the continental U.S. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.

34. Chaikaew P., S. Grunwald, W.G. Harris. 2013. Assessing soil organic carbon change and nutrient loads in surface water in the Suwannee River Basin, Florida. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
35. Clingensmith C.M., S. Grunwald, A.H. Abd-Elrahman and S. Wani. 2013. Rapid soil property analysis by visible-near-infrared diffuse reflectance spectroscopy and chemometric modeling in smallholder farms in India. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
36. Grunwald S., A.B. McBratney, X. Xiong, B. Cao, L.T. West, S. Wills, T.D. Loecke, B. Minasny, S. Campbell, R. Patarasuk and C.W. Ross. 2013. Soil carbon variation along ecological trajectories within the U.S. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
37. Kim J., S. Grunwald and R.G. Rivero. 2013. Assessment of soil carbon stocks using remote sensing images in a carbon rich ecosystem: the Everglades, Florida, U.S. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
38. Kim J. and S. Grunwald. 2013. Evaluating model transferability and scaling in adjacent subtropical wetland in Southern Florida, U.S. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
39. Ross C.W., S. Grunwald and D.B. Myers. 2013. Spatiotemporal modeling of soil organic carbon stocks across a subtropical region. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
40. Xiong X., S. Grunwald, D.B. Myers, W.G. Harris, N. Bliznyuk and N.B. Comerford. 2013. Assessing model structure uncertainty using Bayesian model averaging. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
41. Xiong X., S. Grunwald, D.B. Myers, J. Kim, W.G. Harris, N. Bliznyuk and N.B. Comerford. 2013. Assessing uncertainty in soil carbon assessment using Bayesian hierarchical modeling. ASA-CSSA-SSSA Int. Annual Meeting, Tampa, FL, Nov. 3-6, 2013.
42. Grunwald S., S.E. Smith, S. Wani, C.M. Clingensmith, Y. Xu, A.A. Elrahman, K.R. Reddy, V. Balaji and W. Bowen. 2013. Development of a geospatial soil-crop inference engine for smallholder farmers in India. NSF-GATES Annual Project Meeting, Gates Foundation, Seattle, WA, Oct. 31-Nov. 1, 2013.
43. Wills S., T. Loecke, C. Sequiera, S. Grunwald, L. West, R. Ferguson, E. Benham, K. Scheffe, G. Teachman. 2013. Rapid soil mapping of the U.S.: Initial summary. IUSS Global Soil Carbon Conference, Madison, WI, USA, June 3-6, 2013.
44. Cao B., S. Grunwald and X. Xiong. 2012. Digital soil organic carbon assessment in Florida. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.
45. Cao B., S. Grunwald and X. Xiong. 2012. Cross-regional digital soil carbon modeling for soil carbon assessment at global scale. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.
46. Grunwald S. 2012. Global soil mapping in a changing world. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.
47. Grunwald S., J.L. Boettinger and J.A. Thompson. 2012. The STEP-AWBH space-time model for digital soil mapping. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.
48. Kim J., S. Grunwald, R.G. Rivero and R. Robins. 2012. Multi-scale modeling of soil series using remote sensing in a wetland ecosystem. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.
49. Kim J., S. Grunwald, T.Z. Osborne, R.G. Rivero and R. Robins. 2012. Effects of varying spatial resolutions of remote sensing images on digital prediction models for soil biogeochemical

properties in the Everglades, Florida. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.

50. Xiong S., S. Grunwald and C. Yu. 2012. Fine scale variation of soil organic carbon in five land use / land cover types in Florida, USA. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.
51. Xiong X., S. Grunwald, D.B. Myers, J. Kim, W.G. Harris and N.B. Comerford. 2012. Optimal selection of predicting variables for soil organic carbon modeling in Florida, USA. ASA-CSSA-SSSA Int. Annual Meeting, Cincinnati, OH, Oct. 21-24, 2012.
52. Grunwald S. 2012. Development of a geospatial soil-crop inference engine for smallholder farmers. Annual Basic Research to Enable Agricultural Development (BREAD) Meeting, National Science Foundation, Washington D.C., July 1-3, 2012.
53. Chaikaew P., S. Grunwald, D.B. Myers, N.B. Comerford and W.G. Harris. 2011. Spatio-temporal interactions between soil carbon and nutrient cycles in the Lower Suwannee River Basin No. 264-8. Symposia Spatial Predictions in Soils, Crops and Agro/Forest/Urban/Wetland Ecosystems, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
54. Grunwald S., D.B. Myers, G.M. Vasques, X. Xiong, C.W. Ross, P. Chaikaew, A. Stoppe, N.M. Knox, N.B. Comerford and W.G. Harris. 2011. Spatially-explicit and spectral soil carbon modeling in Florida No. 390-5. Symposia Changes in Soil Carbon Due to Climate and Human Activities, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
55. Grunwald S., J.A. Thompson, J.L. Boettinger. 2011. STEP-AWBH – A spatio-temporal soil modeling framework accounting explicitly for anthropogenic forcings No. 264-18. Symposia Spatial Predictions in Soils, Crops and Agro/Forest/Urban/Wetland Ecosystems, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
56. Hoover B., S. Grunwald, T.A. Martin, G.M. Vasques, N.M. Knox, J. Kim, X. Xiong, P. Chaikaew, J. Adewopo, B. Cao and C.W. Ross. 2011. The Terrestrial Carbon (Terra C) Information System to facilitate carbon synthesis across heterogeneous landscapes No. 264-10. Symposia Spatial Predictions in Soils, Crops and Agro/Forest/Urban/Wetland Ecosystems, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
57. Knox N.M., G.L. Bruland, S. Grunwald, D.B. Myers, M. McDowell, A. Stoppe and N.B. Comerford. 2011. Prediction of soil carbon fractions using MIR spectroscopy across Florida No. 390-4. Symposia Changes in Soil Carbon Due to Climate and Human Activities, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
58. Knox N.M., S. Grunwald, P. Chaikaew and D.B. Myers. 2011. Influence of validation sample selection in ecological modeling No. 262-10. Symposia Spatial Predictions in Soils, Crops and Agro/Forest/Urban/Wetland Ecosystems, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
59. McDowell M., G.L. Bruland, J. Deenik, S. Grunwald and N.M. Knox. 2011. Diffuse reflectance spectroscopy for total carbon analysis of Hawaiian soils. No. 390-3. Symposia Changes in Soil Carbon Due to Climate and Human Activities, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
60. Whitney S.S., A. Shober, G. Toor and S. Grunwald. 2011. Modeling total suspended solids in the Rogue River Watershed (Michigan) for future buffer implementation projects No. 394-16. ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.
61. Xiong X., S. Grunwald, D.B. Myers, W.G. Harris, A. Stoppe and N.B. Comerford. 2011. Are soil carbon models transferable across distinct regions or scales in Florida? No. 262-8. Symposia Spatial Predictions in Soils, Crops and Agro/Forest/Urban/Wetland Ecosystems, ASA-CSSA-SSSA Int. Meeting, San Antonio, TX, Oct. 16-19, 2011.

62. Grunwald S., 2011. Rapid assessment and trajectory modeling of soil carbon across a southeastern landscape. Project Director Meeting NIFA-AFRI-USDA Soil Processes, Asheville, NC, May 26, 2011.
63. McDowell M.L., G.L. Bruland, J.L. Deenik, S. Grunwal and R.S. Uchida. 2010. Diffuse reflectance spectroscopy for total carbon analysis of Hawaiian soils. American Geophysical Union (AGU) Meeting, San Francisco, CA, Dec. 13-17, 2010.
64. Bruland G.L., M.L. McDowell, J. Deenik, R. Uchida and S. Grunwald. 2010. Using Diffuse Reflectance Spectroscopy to Assess Soil Total Carbon in Agricultural Soils of Hawaii and Other Pacific Islands. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
65. Grunwald S., B. Hoover and K.R. Reddy. 2010. EcoLearnIT: A platform to deliver soil, water and environmental education in the 21st Century. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
66. Grunwald S., B. Hoover and K.R. Reddy. 2010. EcoLearnIT - Reusable Learning Objects Focused on Soil, Water, Crop and Environmental Science Topics. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
67. Hong J., S. Grunwald and N.B. Comerford. 2010. Digital soil phosphorus mapping using satellite imagery and ancillary spatial environmental datasets. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
68. Kim J., S. Grunwald, T.Z. Osborne and R.G. Rivero. 2010. Multi-scale Modeling of Biogeochemical Soil Properties using Remote Sensing. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
69. Myers D.B., S. Grunwald, N.B. Comerford and W.G. Harris. 2010. Data Mining Methods for Spatial Models of Soil Organic Carbon in Florida, USA. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
70. Myers D.B., S. Grunwald, N.B. Comerford, and W.G. Harris. 2010. Environmental Factors Relating to Landscape Variation in Soil Carbon Fractions in Florida, USA. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
71. Reddy K.R. and S. Grunwald. 2010. Application of innovative e-technologies for distance education: University of Florida experience. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
72. Ross C.W., S. Grunwald, D.B. Myers, N.B. Comerford, and W.G. Harris. 2010. Spatial-Temporal Carbon Assessment within the St. Johns River Basin. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
73. Xiong X., S. Grunwald, D.B. Myers, W.G. Harris and N.B. Comerford. 2010. Tree-based modeling of soil organic carbon in the Lake Okeechobee Basin, Florida. ASA-CSSA-SSSA Meeting, Long Beach, CA, Oct. 31- Nov. 4.
74. Grunwald S., D.B. Myers, W.G. Harris, N.B. Comerford and G.L. Bruland. 2010. Digital modeling of soil carbon fractions in Florida. PD Meeting NIFA-USDA, Washington D.C., July 4, 2010.
75. Grunwald S., B. Hoover and K.R. Reddy. 2009. Reusable learning objects to support soil, water and environmental education. ASA-CSSA-SSSA Meeting in Pittsburgh, PA, Nov. 1-5, 2009.
76. Hong J., S. Grunwald and N.B. Comerford. 2009. Soil phosphorus modeling using ancillary spatial environmental datasets in the Santa Fe River Watershed. ASA-CSSA-SSSA Meeting in Pittsburgh, PA, Nov. 1-5, 2009.

77. Kwon H.Y., S. Grunwald, H.W. Beck, Y. Jung, S.H. Daroub, T.A. Lang and K.T. Morgan. 2009. Modeling of phosphorus loads from Florida sugarcane farms using ontology-based simulation. ASA-CSSA-SSSA Meeting in Pittsburgh, PA, Nov. 1-5, 2009.
78. Myers D.B., S. Grunwald, G.M. Vasques and W.G. Harris. 2009. Pedotransfer functions for carbon methods and bulk density estimation in Florida soils. ASA-CSSA-SSSA Meeting in Pittsburgh, PA, Nov. 1-5, 2009.
79. Myers D.B., S. Grunwald, A. Stoppe and N.B. Comerford. 2009. Estimation of functional soil organic carbon pools with diffuse reflectance spectroscopy. ASA-CSSA-SSSA Meeting in Pittsburgh, PA, Nov. 1-5, 2009.
80. Sarkhot D.V., S. Grunwald, Y. Ge and C.L.S. Morgan. 2009. Determining the effect of a potential biofuel crop on soil carbon forms and their determination using VisNIR spectroscopy. ASA-CSSA-SSSA Meeting in Pittsburgh, PA, Nov. 1-5, 2009.
81. Vasques G.M., S. Grunwald and D.B. Myers. 2009. Analysis of spatial scaling behavior of soil organic carbon in Florida. ASA-CSSA-SSSA Meeting in Pittsburgh, PA, Nov. 1-5, 2009.
82. Vasques G.M., S. Grunwald, J. Hong and D.B. Myers. 2009. Multi-scale behavior of soil organic carbon at nested locations in Florida. American Association of Geographers Conference, Las Vegas, March 22-27, 2009.
83. Grunwald S., D.B. Myers, N.B. Comerford, W.G. Harris and G.L. Bruland. 2009. Rapid assessment and trajectory modeling of changes in soil carbon across a southeastern landscape (Florida). USDA-NRI meeting, East Lansing, MI, April 8-9, 2009.
84. Grunwald S., D.B. Myers, W.G. Harris, N.B. Comerford and G.L. Bruland. 2009. Rapid assessment and modeling of soil carbon pools across Florida. North American Carbon Program Meeting, San Diego, CA, Feb. 17-20, 2009.
85. Grunwald S., G.M. Vasques and N. DiGruttolo. 2008. Geospatial tracking of black footprints in Florida. ACES – A Conference on Ecosystem Services, Session Carbon Management and Sequestration: Florida's Perspective. Naples, FL, Dec. 8-11, 2008.
86. Clark L., J.-S. Hong, G. Toor, S. Grunwald and C. Stanley. 2008. Relating landuse changes with water quality parameters in the Alafia River Watershed, Florida. 2008. Joint Meeting ASA-CSSA-SSSA and Geological Society of America in Houston, TX, Oct. 5-9, 2008.
87. Ge, Y., C.L.S. Morgan, S. Grunwald and D. Sarkhot. 2008. Comparison of soil organic carbon under a perennial energy crop and Bermuda grass. Joint Meeting ASA-CSSA-SSSA and Geological Society of America in Houston, TX, Oct. 5-9, 2008.
88. Hong J.-S., S. Grunwald, N.B. Comerford and S.E. Smith. 2008. Modeling of soil phosphorus using satellite imagery and ancillary spatial environmental datasets. Joint Meeting ASA-CSSA-SSSA and Geological Society of America in Houston, TX, Oct. 5-9, 2008.
89. Kwon H.-Y., S. Grunwald, H.W. Beck, Y.C. Jung, S. Daroub, T. Lang and K.T. Morgan. 2008. Ontology-based simulation of water flow and phosphorus in organic soils used for sugarcane. Joint Meeting ASA-CSSA-SSSA and Geological Society of America in Houston, TX, Oct. 5-9, 2008.
90. Lamsal S., S. Grunwald, C.M. Bliss, N.B. Comerford and D.A. Graetz. 2008. Geospatial mapping of soil nitrate-nitrogen distribution under a mixed land use system. Joint Meeting ASA-CSSA-SSSA and Geological Society of America in Houston, TX, Oct. 5-9, 2008.
91. Sarkhot D., S. Grunwald, N.B. Comerford, W.G. Harris and G.L. Bruland. 2008. Effect of land use on soil carbon content across a large subtropical soilscape. Joint Meeting ASA-CSSA-SSSA and Geological Society of America in Houston, TX, Oct. 5-9, 2008.

92. McKee K.A., M.W. Clark and S. Grunwald. 2008. Soil Phosphorus storage in isolated wetlands of improved pastures north of Lake Okeechobee. Greater Everglades Ecosystem Restoration Conference, Naples, FL, July 28-Aug. 1, 2008.
93. Rivero R.G., S. Grunwald, M.W. Binford, T.Z. Osborne and K.R. Reddy. 2008. Applications of remote sensing and multivariate geostatistics in order to improve spatial modeling of soil phosphorus predictions in wetland areas. Study case: WCA-2A, Everglades. Symposium on Biogeochemistry and Water Quality of the Greater Everglades: Fate and Transport of Nutrients and Other Contaminants – Greater Everglades Ecosystem Restoration Conference, Naples, FL, July 28-Aug. 1, 2008.
94. Grunwald S., G.M. Vasques, N.B. Comerford, G.L. Bruland and C.M. Bliss. 2008. Integrative geostatistical analysis of soil carbon, nitrogen and phosphorus across a large subtropical watershed. American Association of Geography (AAG), Boston, MS, April 15-19, 2008.
95. Grunwald S., N.B. Comerford, W.G. Harris and G.L. Bruland. 2008. Rapid assessment and trajectory modeling of changes in soil carbon across a southeastern landscape. USDA-National Research Initiative Project Director meeting. Menlo Park, CA, Feb. 24-26, 2008.
96. Grunwald S., G.M. Vasques, N.B. Comerford, G.L. Bruland, C.M. Bliss, D.A. Graetz and J.O. Sickman. 2007. Integration of carbon, nitrogen and phosphorus into a spatially-explicit soil-landscape model using geostatistical methods. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
97. Vasques G.M., S. Grunwald, J.O. Sickman and N.B. Comerford. 2007. Assessment of dynamic soil carbon pools at the watershed scale using regression kriging. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
98. Ahn M.-Y., N.B. Comerford, A.R Zimmerman, S. Grunwald and J. O. Sickman. 2007. The rate of soil organic carbon mineralization in 140 soils of a North Florida watershed. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
99. Vasques G.M., S. Grunwald and J.O. Sickman. 2007. Assessment of dynamic soil carbon pools using visible/near-infrared diffuse reflectance spectroscopy (VNIRS) and various multivariate methods. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
100. Stoppe A.M., N.B. Comerford, S. Grunwald and J. Sickman. 2007. Nitrogen and phosphorus mineralization as influenced by land use and soil characteristics in a north Florida watershed. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
101. Kwon H.-Y., S. Grunwald, H.W. Beck and K.T. Morgan. 2007. Ontology-based simulations for minimizing environmental impacts of Florida sugarcane production. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
102. Kapner T., S. Grunwald, K.R. Reddy, T.Z. Osborne and S. Newman. 2007. GIS-based analysis of physico-chemical soil properties, nutrient influx points and vegetative patterns characterized by field and remote sensing data. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
103. Rivero R.G., S. Grunwald, G.L. Bruland, M.W. Binford, K.R. Reddy, T.Z. Osborne and S. Newman. 2007. Spectral inferential modeling of soil phosphorus using hybrid geostatistical methods. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
104. Daroub S., T. Lang, O. Diaz, M. Chen, M.M. Brennan and S. Grunwald. 2007. Evaluation of factors affecting farm phosphorus loads in south Florida using long-term monitoring data. ASA-CSSA-SSSA Meeting in New Orleans, LA, Nov. 4-8, 2007.
105. Bliss C.M., I. Lopez-Zamora, N.B. Comerford, S. Grunwald, E.J. Jokela and E. Barnard. 2005. Spatial distribution of nitrogen and carbon in soil size fractions in pine plantations affected by poultry emissions. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.

106. Jokela E.J., C.M. Bliss, I. Lopez-Zamora, N.B. Comerford, S. Grunwald and E. Barnard. 2005. Spatial distribution of phosphorus and cations in slash pine foliage and forest floor: effects of emissions from poultry operations in north Florida. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
107. Bliss C.M., G.L. Bruland, I. Lopez-Zamora, N.B. Comerford, D.A. Graetz and S. Grunwald. 2005. Carbon, nitrogen, and phosphorus in soil size fractions: influence of land use and soil type in a north Florida watershed. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
108. Grunwald S., C.M. Bliss, G.L. Bruland, I. Lopez-Zamora, D.A. Graetz and N.B. Comerford. 2005. Geospatial modeling of phosphorus within a multi-functional and multi-use watershed. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
109. Grunwald S., G.L. Bruland, T.Z. Osborne, S. Newman and K.R. Reddy. 2005. Spatial principal component mapping of physico-chemical soil properties in the Greater Everglades. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
110. Bruland G.L., C.M. Bliss, S. Grunwald, N.B. Comerford and D.A. Graetz. 2005. Soil nitrate in forested versus non-forested land-uses in the Santa Fe Watershed, Florida. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
111. Bruland G.L., S. Grunwald, T.Z. Osborne, K.R. Reddy and S. Newman. 2005. Spatial distribution of soil properties and soil physical-chemical diversity in the Greater Everglades Ecosystem. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
112. Stoppe A., C.M. Bliss, N.B. Comerford, D.A. Graetz and S. Grunwald. 2005. Phosphorus and nitrogen in soil size fractions: mineralizability of each fraction as affected by land use and soil type. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
113. Rivero R.G., S. Grunwald, T.Z. Osborne, S. Newman, K.R. Reddy. 2005. Comparative analysis of hybrid geostatistical methods for advanced soil mapping in WCA-2A, Everglades, Florida. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
114. Osborne T.Z., G.L. Bruland, K.R. Reddy, S. Newman and S. Grunwald. 2005. Spatial distribution and linkages of soil biogeochemical properties in the Everglades National Park. ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Nov. 7-10, 2005.
115. Grunwald S., G.L. Bruland, S. Lamsal, C.M. Bliss, N.B. Comerford and M.W. Clark. 2005. Development of predictive geospatial soil nitrate-nitrogen models in the Santa Fe River Watershed. CSREES National Water Quality Conference, San Diego, CA, Feb. 7-9, 2005.
116. Rivero R.G., S. Grunwald, T.Z. Osborne, S. Newman and K.R. Reddy. 2004. Application of soil mapping and modeling efforts in WCA2 integrating GIS, geostatistics and remote sensing techniques. National Conference on Ecosystem Restoration, Lake Buena Vista, FL, Dec. 6-10, 2004.
117. McKee K.A., S. Grunwald, M.W. Clark and S. Newman. 2004. Phosphorus estimation in isolated wetlands of Lake Okeechobee sub-basins using GIS, remote sensing and classification trees. National Conference on Ecosystem Restoration, Lake Buena Vista, FL, Dec. 6-10, 2004.
118. Bruland G.L., S. Grunwald, T.Z. Osborne, K.R. Reddy and S. Newman. 2004. Statistical and geostatistical analyses of soils data from Water Conservation Area 3, South Florida. National Conference on Ecosystem Restoration, Lake Buena Vista, FL, Dec. 6-10, 2004.
119. Grunwald S., K.R. Reddy, T.Z. Osborne, R. Corstanje, M.W. Clark and S. Newman. 2004. Spatially-explicit modeling of soil phosphorus across the Greater Everglades. National Conference on Ecosystem Restoration, Lake Buena Vista, FL, Dec. 6-10, 2004.
120. Bliss C.M., I. Lopez-Zamora, N.B. Comerford, S. Grunwald, E.J. Jokela, E. Barnard and G.M. Vasques. 2004. Relationship between nitrogen loading and pitch canker disease in slash

pine stands adjacent to poultry operations. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31-Nov. 4, 2004.

121. Lopez-Zamora I., C.M. Bliss, N.B. Comerford, E.J. Jokela, S. Grunwald, E. Barnard and G.M. Vasques. 2004. Effect of nitrogen emissions from poultry operations on nitrogen deposition and pitch canker disease in slash pine stands. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
122. Reddy K.R., J.L. Havlin and S. Grunwald. 2004. Distance education in soil, water, and environmental sciences. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
123. Bloom S.A., S. Grunwald, R.G. Rivero, V. Ramasundaram, G.W. Hurt and W.G. Harris. 2004. The web-based Florida soil characterization database and thematic soil mapping tool. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
124. Sabesan A., S. Grunwald, M.W. Binford and M.W. Clark. 2004. Backcasting of land use pattern using remote sensing to support soil-landscape modeling. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
125. Lamsal S., S. Grunwald, C.M. Bliss, I. Lopez-Zamora, M.W. Clark and N.B. Comerford. 2004. Comparison of multivariate non-parametric methods for predictive modeling of soil properties in a mixed-use watershed in Florida. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
126. Grunwald S., K.R. Reddy and T.Z. Osborne. 2004. Geostatistical modeling of soil phosphorus in the Greater Everglades Ecosystem. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
127. Qi C. and S. Grunwald. 2004. GIS-based spatially-distributed water quality modeling in the Sandusky Watershed. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
128. Corstanje R., S. Grunwald, K.R. Reddy and T.Z. Osborne. 2004. Modeling of the spatial distribution of selected soil nutrients in Loxahatchee National Park. ASA-CSSA-SSSA Meeting, Seattle, WA, Oct. 31 - Nov. 4, 2004.
129. Grunwald S., V. Ramasundaram and D. K. Jesseman. 2004. The promises and limitations of a virtual computer laboratory. 19th Annual Conference on Distance Teaching and Learning, Madison, WI, Aug. 4-6, 2004.
130. Grunwald S., V. Ramasundaram and D.K. Jesseman. 2004. A virtual GIS computer lab for on-campus and distance education students. NACTA Conference, Gainesville, FL, June 21-23, 2004.
131. Grunwald S. and K.R. Reddy. 2004. The Distance Education Track in Environmental Sciences. NACTA Conference, Gainesville, FL, June 21-23, 2004.
132. Corstanje R., S. Grunwald and K.R. Reddy. 2004. Spatial patterns of labile forms of phosphorus in a subtropical wetland 20 years after a sustained nutrient impact. American Society of Limnology and Oceanography (ASLO) Meeting, Savannah, GA, June 13-18, 2004.
133. Osborne T.Z., K.R. Reddy, S. Grunwald and S. Newman. 2004. Ecosystems and vegetation communities as factors in dissolved organic carbon production in the Greater Everglades basin. American Society of Limnology and Oceanography (ASLO) Meeting, Savannah, GA, June 13-18, 2004.
134. Sabesan A., S. Grunwald, M.W. Clark, N.B. Comerford, D.A. Graetz and R.B. Brown. 2003. Targeting sampling locations using GIS and remote sensing datasets. S05-sabesan265102-poster. ASA-CSSA-SSSA Annual Meeting, Denver, CO, Nov. 2-6, 2003.
135. McKee K.A., S. Grunwald, M.W. Clark and K.R. Reddy. 2003. Upscaling of wetland indicators from site-specific to regional scale. S05-mckee295006-poster. ASA-CSSA-SSSA Annual Meeting, Denver, CO, Nov. 2-6, 2003.

136. Ramasundaram V., S. Grunwald and S.S. Chen. 2003. A modular e-learning environment to teach GIS to on-campus and distance education students. A01-grunwald554450-poster. ASA-CSSA-SSSA Annual Meeting, Denver, CO, Nov. 2-6, 2003.
137. Grunwald S. and G.B.M. Heuvelink. 2003. Pedometrics - an asset for soil mapping? S05-grunwald593297-poster. ASA-CSSA-SSSA Annual Meeting, Denver, CO, Nov. 2-6, 2003.
138. Grunwald S., K.R. Reddy and S. Newman. 2003. Assessment of spatial variability and uncertainty of soil quality indicators in a south Florida conservation area. S05-grunwald220696-oral. ASA-CSSA-SSSA Annual Meeting, Denver, CO, Nov. 2-6, 2003.
139. Grunwald S., K.R. Reddy, V. Mathiyalagan and S.A. Bloom. 2003. A virtual geo-information and visualization framework for Florida's wetland. 24th Annual Meeting of the Society of Wetland Scientists, New Orleans, LA, June 8-13, 2003.
140. Grunwald S. and K.R. Reddy. 2003. Distance Education in Environmental Science. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys", Palm Harbor, Florida, April 2003.
141. Barnard E.L., A.N. van Loan, E.J. Jokela, S. Grunwald and N.B. Comerford. 2003. Juxtaposition of pines and poultry: a potential problem for both. Nat. Health Forestry Workshop, Monterey, CA, Jan. 2003.
142. Grunwald S. 2002. What do we really know about the space-time continuum of soil-landscapes? Keynote Talk Soil-Landscape Modeling Symposium. S05-grunwald092911-Oral. ASA-CSSA-SSSA Meeting, Indianapolis, IN, Nov. 10-14, 2002.
143. Grunwald S. 2002. Beyond the 2D soil-landscape snapshot: making the invisible visible. Soil-Landscape Modeling Symposium. S05-grunwald094559-Oral. ASA-CSSA-SSSA Meeting, Indianapolis, IN, Nov. 10-14, 2002.
144. Tischler M.A., M.E. Collins and S. Grunwald. 2002. 3D modeling and visualization of soil features using GPR data. S05-tischler125437-Oral. ASA-CSSA-SSSA Meeting in Indianapolis, IN, Nov. 10-14, 2002.
145. Tischler M.A., S. Grunwald and M.E. Collins. 2002. Transcending conventional GPR data. S05-tischler130506-Oral. ASA-CSSA-SSSA Meeting, Indianapolis, IN, Nov. 10-14, 2002.
146. Rooney D.J., M.A. Cheyne, R.L. McLeese and S. Grunwald. 2002. Underground truthing? - seeing is believing. S05-rooney085428-Oral. ASA-CSSA-SSSA Meeting, Indianapolis, IN, Nov. 10-14, 2002.
147. Tischler M.A., M.E. Collins and S. Grunwald. 2002. Integration of ground-penetrating radar data, global positioning systems, and geographic information systems to create three-dimensional soil models. Ground Penetrating Radar Conference, Santa Barbara, CA, April 29-May 2, 2002.
148. Grunwald S. 2002. Geographic information technology applied to land resource management. ASAE Int. Meeting / CGIAR World Congress in Chicago, July 29-31, 2002. Paper No. 023030.
149. Grunwald S. 2001. 3D reconstruction of soil-landscapes. S05-grunwald142851-oral. Annual ASA-CSSA-SSSA Meeting in Charlotte, NC, Oct. 21-25, 2001.
150. Grunwald S. and P. Barak. 2001. Web-based virtual models for the earth science community. Paper No. 013029. ASAE Int. Meeting in Sacramento, CA, July 29-Aug. 1, 2001.
151. Grunwald S., P. Barak, K. McSweeney and B. Lowery. 2000. Virtual soil landscapes: a new paradigm. Annual ASA-CSSA-SSSA Meeting, Minneapolis, MN, Nov. 5-9, 2000.
152. Grunwald S., P. Barak and K. McSweeney. 1999. Soil landscape models portrayed in Virtual Reality Modeling Language (VRML). Annual ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Oct. 31-Nov. 4, 1999.

153. Harris R.F., S. Grunwald, K. McSweeney, S. Mukhtyar, B. Lowery and S.J. Ventura. 1999. Structure and function of the Wisconsin Agricultural Research Station GIS. Annual ASA-CSSA-SSSA Meeting, Salt Lake City, UT, Oct. 31- Nov. 4, 1999.
154. Grunwald S., R.F. Harris, K. McSweeney, S.J. Ventura and B. Lowery. 1998. Critical site GIS coverages for water quality protection. Annual ASA-CSSA-SSSA Meeting, Baltimore, MD, Oct. 18-22, 1998.
155. Grunwald S., K. McSweeney, B. Lowery and D.J. Rooney. 1998. Continuous description of soil attributes on a landscape in southern Wisconsin. ASA-CSSA-SSSA Annual Meeting, Baltimore, MD, Oct. 18-22, 1998.
156. Fagan P., K. McSweeney, R. Nordheim and S. Grunwald. 1998. Directed sampling using soil and topographic attributes. ASA-CSSA-SSSA Annual Meeting in Baltimore, MD, Oct. 18-22, 1998.

(C) Regional Presentations

Invited

1. Grunwald S., X. Xiong, B. Cao, A.B. McBratney, B. Minasny, C.W. Ross and R. Patarasuk. 2014. Rapid carbon assessment project – soil carbon mapping and modeling. South Regional Cooperative Soil Survey Conference, Jackson, TN, June 23-26, 2014.
2. Grunwald S. and Xiong X. 2013. Digital soil mapping – Case studies from Florida. Soil Science Society of Georgia Annual Meeting, Athens, GA, Feb. 25-26, 2013.
3. Grunwald S., 2010. Modeling approaches, scaling, and measurements. Integrated Research, Education and Extension to Enable Sustainable Bioenergy Production: A Workshop to Organize Research Efforts in the Southeast U.S., Lexington, KY, June 14-15, 2010.
4. Grunwald S., 2010. Land resource base – ecological regions. Integrated Research, Education and Extension to Enable Sustainable Bioenergy Production: A Workshop to Organize Research Efforts in the Southeast U.S., Lexington, KY, June 14-15, 2010.
5. Grunwald S. and J. Shaw. 2010. Multi-scale experimental site selection, sampling and data assembly to enable sustainable biofuel feedstock production in the southeastern U.S. Integrated Research, Education and Extension to Enable Sustainable Bioenergy Production: A Workshop to Organize Research Efforts in the Southeast U.S., Lexington, KY, May 13-14, 2010.
6. Grunwald S. 2009. Shared experiences with distance learning and instruction. Joint annual meeting of the Florida State Horticultural Society & Soil and Crop Science Society of Florida, Jacksonville, FL, June 7-9, 2009.
7. Grunwald S. 2008. Digital soil mapping – menace, myth or miracle? Southern Regional Cooperative Soil Science Conference, Gainesville, FL, July 14-17, 2008.
8. Grunwald S. 2007. Opportunities for greenhouse gas reduction by agriculture and forestry in Florida - Role of soils to sequester carbon. Carbon Workshop (Department of Environmental Defense), Gainesville, FL, July 25, 2007.
9. Grunwald S. and K.R. Reddy. 2005. Distance education courses and programs of the Soil and Water Science Department - experiences and challenges. Department of Agronomy and Soils, Auburn University, AL, Dec. 8, 2005.
10. Grunwald S. 2004. The distance education graduate track in environmental science offered by the Soil and Water Science Department, Florida Environmental Protection Agency Tampa, FL, May 4, 2004.
11. Grunwald S. 2002. Geographic information technology applied to soil mapping. Natural Resource Conservation Service (NRCS) Conference, Tybee Island, GA, June 3-6, 2002.

12. Grunwald S. 2000. Trends and development in pedology. Ohio Natural Resource Conservation Service (NRCS) 2000 Meeting, Bucyrus, OH, Sept. 12, 2000.
13. Grunwald S. 2000. GIS-based water quality modeling in the Sandusky Watershed. Sandusky River Watershed Coalition, Tiffin, OH, July 9, 2000.

Volunteered

1. Grunwald S. and R. Bracho-Garrillo. 2016. Data base policy, sharing, archiving and management in TerraC-Pinemap. Pinemap Annual Meeting, Athens, GA, May 24-26, 2016.
2. Ross C.W., S. Grunwald, J. Vogel, A. Bacon, E.J. Jokela, R. Bracho-Garrilo, M. Akers, J. Cucinella, A. Laviner, D. Markewitz, T. Fox and T.A. Martin. 2016. Data mining reveals relationships between soil carbon and environmental factors at tier 2 sites. Pinemap Annual Meeting, Athens, GA, May 24-26, 2016.
3. Iglesias L., I. Liburd and S. Grunwald. 2016. Identification of potential wild host habitats for drosophila suzukii and their distribution around cultivated blueberry farms. Entomological Society of America (ESA) Southern Branch Meeting, Raleigh, North Carolina, March 13-16, 2016.
4. Battle K.M., C.A. Gonzalez-Benecke, S. Grunwald, and T.A. Martin. 2015. TerraC – PINEMAP Data Management System, Pinemap Annual Meeting, Athens, GA, June 3-4, 2015.
5. Ross C.W., S. Grunwald, W. Cropper, S. Gerber and L. Kobziar. 2015. DayCent calibration at the Pinemap tier 3. Pinemap Annual Meeting, Athens, GA, June 3-4, 2015.
6. Patarasuk R., S. Grunwald, C.W. Ross, X. Xiong, B. Cao and B. Hoover. 2013. A spatially-explicit landscape modeling approach to assess the growth of Loblolly Pine forests. 2013. Pinemap Annual Meeting, Athens, GA, April 24-26, 2013.
7. Ross C.W., S. Grunwald, S. Gerber, L. Kobziar and E.A.G. Schuur. 2013. Terrestrial carbon dynamics across the Southeastern US. Pinemap Annual Meeting, Athens, GA, April 24-26, 2013.
8. Raymundo R., C. Gavilan, S.K. Shakya, S. Asseng, S. Grunwald, A. van Bruggen, E. Goss, J. Sterns, W. Bowen, R. Quiroz, A. Devaux, J. Andrade-Piedra, U. Kleinwechter and G. Hareau. 2013. Prioritizing climate change adaptation needs for food security in the Andes. Sustaining Economies and Natural Resources in a Changing World Meeting, Gainesville, FL, April 2-3, 2013.
9. Grunwald S., B. Hoover, and R. Patarasuk. 2012. Terra C and Pinemap data resources. Webinar series Pinemap project. Gainesville, FL, July 13, 2012.
10. Hong J., S. Grunwald, N.B. Comerford and C.M. Bliss. 2008. Digital soil mapping of soil phosphorus in the Santa Fe River Watershed. Southern Regional Cooperative Soil Science Conference, Gainesville, FL, July 14-17. 2008.
11. Kapner T., S. Grunwald, K.R. Reddy and T.Z. Osborne. 2008. Remote-sensing supported analysis of soil properties in Water Conservation Area 1, Everglades. Southern Regional Cooperative Soil Science Conference, Gainesville, FL, July 14-17. 2008.
12. Sarkhot S., S. Grunwald, N.B. Comerford, W.G. Harris and G.L. Bruland. 2008. Development of a strategic spatial sampling design for the State of Florida. Southern Regional Cooperative Soil Science Conference, Gainesville, FL, July 14-17. 2008.
13. Vasques G.M., N. DiGruttolo and S. Grunwald. 2008. Comparison of soil information system and field data to measure soil organic carbon. Southern Regional Cooperative Soil Science Conference, Gainesville, FL, July 14-17. 2008.
14. Cohen M.J., S. Grunwald, M.W. Clark and K.R. Reddy. 2006. Developing a rapid ecosystem performance indicator based on NIR spectroscopy of Everglades soils. Greater Everglades Ecosystem Restoration Conference - Planning, Policy and Science, Lake Buena Vista, FL, June 5-9, 2006.

15. Osborne T.Z., K.R. Reddy and S. Grunwald. 2006. Results from the Everglades soil mapping project. REMAP project group - South Florida Water Management District. West Palm Beach, FL, March 14, 2006.
16. Lamsal S., S. Grunwald, C. M. Bliss, I. Lopez-Zamora, N.B. Comerford and M.W. Clark. 2004. Assessment of nitrate-nitrogen variability in soils of the Santa Fe River Watershed in north-east Florida. Suwannee River Basin Workshop, Cedar Key, FL, Sept. 22-24, 2004.
17. Grunwald S. and K.R. Reddy. 2003. The Distance Education Graduate Track in Environmental Sciences. Soil and Crop Science Conference, Tallahassee, FL, May 2003.
18. Grunwald S. 2002. 3D geographic information technology applied to land resource management. Agricultural Research Service – United States Department of Agriculture (ARS-USDA), Tifton, GA, March 2002.
19. Grunwald S. 2000. Virtual reality and soil-landscape modeling. Ohio State University, Columbus, OH, April 17, 2000.

(D) State Presentations

Invited

1. Grunwald S. 2020. Introductory talk – mindful moments, Southwest Regional Master Gardener Conference, Virtual, Oct. 19-20, 2020.
2. Grunwald S. 2011. Spatially-explicit soil carbon modeling in Florida. Florida State and Mechanical University (Florida A&M University), Center for Water and Air Quality, Tallahassee, Jan. 27, 2011.
3. Grunwald S. and K.R. Reddy. 2010. Statewide Distance Education, Off-campus and Hybrid Programs, CALS/UF. Gainesville, FL, Dec. 21, 2010.
4. Grunwald S. 2010. Carbon assessment throughout the State of Florida. Florida Forever Climate Change Meeting. Gainesville, FL, Oct. 5, 2010.
5. Grunwald S. and K.R. Reddy. 2010. Statewide Distance Education, Off-campus and Hybrid Programs, CALS/UF. Gainesville, FL, May 12, 2010.
6. Grunwald S. 2008. Overview Distance Education Graduate Programs in Environmental Science. Indian River Research and Education Center, Fort Pierce, FL, Jan. 15, 2008.

Volunteered

1. Hoover B., N.M. Knox, S. Grunwald, T.A. Martin, X. Xiong, P. Chaikaew, J. Kim and B. Cao. 2011. Synthesis tools for carbon assessment in ecosystems. Florida Energy Systems Consortium Summit, Gainesville, FL, Sept. 27-28, 2011.
2. Grunwald S., T.A. Martin, B. Hoover, G.M. Vasques, B. Zhong and D. DePatie. 2010. Terrestrial Carbon Information System. Florida Energy Systems Consortium Summit, Tampa, FL, Sept. 29-30, 2010.
3. Grunwald S., T.A. Martin, G.M. Vasques and B. Hoover. 2009. Database infrastructure for integrative carbon science research. Florida Energy Systems Consortium Summit, Tampa, FL, Sept. 29-30, 2009.
4. Grunwald S., N.B. Comerford, D.A. Graetz, M.W. Clark, C.M. Bliss and G.L. Bruland. 2006. Digital soil mapping in the Santa Fe River Watershed. Suwannee River Partnership Steering Committee meeting, Live Oak, FL, June 29, 2006.
5. Lamsal S., S. Grunwald, C.M. Bliss, I. Lopez-Zamora and N.B. Comerford. 2004. Upscaling site-specific nitrate-nitrogen measurements to watershed scale in the Santa Fe River Watershed. Soil and Crop Science Society of Florida, Tallahassee, FL, May 20-21, 2004. *Student was awarded price in student competition.*

6. Grunwald S., T.F.A. Bishop, K.R. Reddy and S. Newman. 2003. Linking historic, present, and future spatial variability of soil attributes in the Greater Everglades Ecosystem. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys", Palm Harbor, FL, April 13-18, 2003.
7. Grunwald S., K.R. Reddy, V. Mathiyalagan and S.A. Bloom. 2003. Florida's wetland webGIS and geo-database. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem "From Kissimmee to the Keys", Palm Harbor, FL, April 13-18, 2003.
8. Grunwald S. 2002. Methods for explicit geo-temporal modeling of environmental systems. St. Johns Water Management District, Sept. 2002.
9. Grunwald S., N.B. Comerford, M.W. Clark and D.A. Graetz. 2002. Geo-temporal estimation and visualization of nitrogen in a mixed-use watershed (Santa Fe River Watershed). Suwannee River Water Management District, Aug. 2002.
10. Grunwald S. 2002. Holistic land resource management. South Florida Water Management District, April 12, 2002.

(E) Local Presentations

Invited

1. Grunwald S. 2021. AI Modeling of soils from local to global scale. Soil, Water and Ecosystem Sciences Department, UF, Seminar Series, Oct. 15, 2021.
2. Grunwald S. 2020. Mindfulness at UF to boost individual and institutional health. Department of Clinical and Health Psychology, College of Public Health and Health Professions, UF, Colloquium Series, July 17, 2020.
3. Grunwald S. 2017. Mindfulness and staying in the “green zone”. Wellness Wednesdays UF Health Wellness seminar, Gainesville, FL, Aug. 2, 2017. Seminar recording: https://mediasite.video.ufl.edu/Mediasite/Play/2499d52dd4a34d6786cd5317d8074a851d
4. Wallace K.M., S. Shukla, M. Cohen and S. Grunwald. 2016. Shifting watershed boundaries in a low relief landscape: seasonality, identification and implications. South Florida Research Symposium, South Florida REC, Fort Lauderdale, FL, July 14, 2016.
5. Grunwald, S. 2016. The power of mindfulness in creating space to address the challenges in a complexifying world. Invited seminar in the leadership seminar series. CALS UF, Gainesville, FL, Feb. 26, 2016.
6. Mizuta K., S. Grunwald, W.P. Cropper, W. Lee, G.M. Vasques and M.A. Phillips. 2016. Prototype Development of a New Soil Index Using Econometrics Method: Data Envelopment Analysis. Soil and Water Sciences Research Forum, Gainesville, FL, Sept. 15, 2016.
7. Ross C.W., S. Grunwald, J. Vogel, A. Bacon, E.J. Jokelam R. Bracho-Garrilo, M. Akers, J. Cucinella, A. Laviner, D. Markewitz, T. Fox and T. Martin. 2016. Data mining reveals relationships between soil carbon and environmental factors at tier 2 sites. Soil and Water Science Research Forum, Gainesville, FL, Sept. 15, 2016.
8. Xiong X., S. Grunwald, D.B. Myers, J. Kim, W.G. Harris and N.B. Comerford.2012. GIS supported digital soil mapping in Florida. GIS Day @ University of Florida, Gainesville, FL, Nov. 14, 2012.
9. Grunwald S. 2012. Soil carbon variability across large landscapes. Soil and Water Science Research Forum, Gainesville, FL, Sept. 7, 2012.

10. Kim J., S. Grunwald, T.Z. Osborne, R. Robbins, H. Yamataki, and R.G. Rivero. 2012. Remote sensing supported digital soil mapping aquatic ecosystems. 2012 Florida Soil Survey Work Planning Conference, Gainesville, FL, July 17, 2012.
11. Grunwald S. 2011. Remote sensing supported digital soil mapping and modeling. Center for Remote Sensing, UF, Gainesville, FL, Nov. 18, 2011.
12. Grunwald S. 2011. GIS-based digital soil mapping across large regions. GIS Day@UF, Gainesville, FL, Nov. 16, 2011.
13. Hoover B., N.M. Knox, S. Grunwald, T.A. Martin, X. Xiong, P. Chaikaew, J. Kim, and B. Cao. 2011. Synthesis tools for carbon assessment in ecosystems. FESC Summit, University of Florida, Gainesville, FL, Sept 28-29, 2011.
14. Grunwald S., X. Xiong, D.B. Myers, N.M. Knox, N.B. Comerford, and W.G. Harris. 2011. Soil carbon assessment across Florida. Florida Cooperative Soil Survey Work Planning Conference. Natural Resources Conservation Service, Gainesville, FL, June 29, 2011.
15. Kim J., N.M. Knox, and S. Grunwald. 2011. Remote-sensing supported soil mapping in Florida. Florida Cooperative Soil Survey Work Planning Conference. Natural Resources Conservation Service, Gainesville, FL, June 29, 2011.
16. Grunwald S. 2011. Inaugural Seminar – Full Professor. Soil-landscape modeling at the nexus of the Anthropocene. Gainesville, UF, March 14, 2011.
17. Grunwald S., D.B. Myers, G.M. Vasques, W.G. Harris and N.B. Comerford. 2010. Geospatial soil carbon modeling across the State of Florida. GISDay @ the University of Florida, Gainesville, FL, Nov. 17, 2010.
18. Grunwald S., J. Kim, T.Z. Osborne, and R.G. Rivero. 2010. Remote sensing supported digital soil mapping in south Florida. 2010 Florida Soil Survey Work Planning Conference, Gainesville, FL, June 30, 2010.
19. Grunwald S. 2010. Soil Carbon Assessment in Florida. North-Central FL Renewable RC&D Council Inc., Gainesville, FL, March 31, 2010.
20. Grunwald S. and K.R. Reddy. 2009. Information and communication technologies for capacity building in water management: U.S. India collaborative extension/outreach and distance education. Colloquium UF AKI Projects – U.S. India Agricultural Knowledge Initiative. Gainesville, FL, Jan. 26, 2009.
21. Grunwald S. 2009. Geospatial analysis and quantitative methods to analyze environmental data. Colloquium NSF-IGERT Spatial Dynamics. Gainesville, FL, Jan 23, 2009.
22. Grunwald S. 2009. Geospatial tracking of soil carbon. UF Carbon Resources Science Center seminar series. Gainesville FL, Jan. 23, 2009.
23. Beck H.W., S. Grunwald and B. Hoover. 2008. Session on “The Object is to Learn – Learning Objects” offered at the CALS Teaching Enhancement Symposium, Gainesville, FL, Aug. 11, 2008.
24. Grunwald S. 2008. Update of digital soil mapping activities at the UF. Florida Cooperative Soil Survey Work Planning Conference, Natural Resource Conservation Service (NRCS), Gainesville, FL, July 18, 2008.
25. Grunwald S. 2008. Experiences with teaching in online mode in the Soil and Water Science Department School of Forest Resources and Conservation, UF. Distance Education Workshop, Gainesville, May 13, 2008.
26. Grunwald S. 2007. Adobe Connect use in graduate education. UF-CALS Teaching Enhancement Symposium 2007, Gainesville, FL, Aug. 13, 2007.
27. Grunwald S. and B. Hoover. 2007. EcoLearnIT - A digital library of Reusable Learning Objects (RLOs). UF-CALS Teaching Enhancement Symposium 2007, Gainesville, FL, Aug. 13, 2007.

28. Grunwald S., B. Hoover and K.R. Reddy. 2007. Experiences with online collaborative software Adobe Connect - Distance Education M.S. Track in Environmental Science. UF-CALS Teaching Enhancement Symposium 2007, Gainesville, FL, Aug. 13, 2007.
29. Grunwald S. 2006. Assessment of environmental quality using geostatistics and hybrid models. Geospatial Research Forum, University of Florida, Gainesville, FL Sept. 25, 2006.
30. Grunwald S. 2004. Update on the Santa Fe River project: Soil nitrate-nitrogen and surface water quality in the Santa Fe River Watershed. Florida Forest Association - Environmental Committee, Lake City, FL, Oct. 18, 2004.
31. Grunwald S., V. Ramasundaram and D.K. Jesseman. 2004. A virtual computer laboratory to enhance a distance education GIS course. UF-CALS Teaching Enhancement Symposium 2004, Gainesville, FL, Aug. 18, 2004.
32. Grunwald S. and J.M. Spooner. 2004. Innovative delivery methods for computer-based classes. UF-CALS Teaching Enhancement Symposium 2004, Gainesville, FL, Aug. 18, 2004.
33. Grunwald S. 2003. Spatially-explicit modeling of environmental quality in a Florida wetland. Wetland Seminar Series, Odum Center for Wetlands, Dept. of Environmental Engineering, UF, Gainesville, FL, Nov. 2003.
34. Grunwald S. 2003. The Santa Fe River project – a research and extension project. Florida Forest Association - Environmental Committee, Lake City, FL, Oct. 2003.
35. Grunwald S. 2003. The Santa Fe River project – a research and extension project. Santa Fe Springs Working Group, Spring Ridge Volunteer Fire Department, FL, Sept. 2003.
36. Grunwald S. 2003. Inventory of physico-chemical soil properties and spatial pattern analyses in the Everglades ecosystem. Center for Natural Resources US/IFAS, Gainesville, FL, March 7, 2003.
37. Grunwald S. and K.R. Reddy. 2003. Spatially-explicit modeling of soil quality indicators. UF Precision Agriculture (PARS) Working Group, Gainesville, FL, March 3, 2003.
38. Grunwald S. 2003. Overview – The Distance Education Graduate Track in Environmental Science, Entomology Dept. UF, Gainesville, FL, Jan. 21, 2003.
39. Grunwald S. 2000. Virtual reality and soil-landscape modeling. Seminar presentation at School of Natural Resources, Ohio State University, Columbus, OH, April 17, 2000.

Volunteered

1. Lu Y., Y.-C. Wang, S. Grunwald and S.L. Chu. 2023. Videography-facilitated nature-based mindfulness at natural destinations: Perspective of the attention restoration theory. UF College of Health and Human Performance Research Symposium, Feb. 24, 2023.
2. Zhou J., M. Deitch and S. Grunwald. 2022. The impact of missing data and averaging of time series on the power of Mann-Kendall trend test and the theil-sen slope. UF Water Institute Symposium 'Sustainable Water Resources – Complex Challenges, Integrated Solutions', J. Wayne Reitz Union, Gainesville, FL, Feb. 22-23, 2022.
3. Grunwald S. 2021. Soil spectral modeling and artificial intelligence. Seminar given at the West Florida Research and Education Center, Milton, FL, July 15, 2021.
4. Grunwald S. 2019. Inner empowerment and outer transformation: Interpersonal mindfulness and alternative forms of activism. UF Mindfulness Day "Mindfulness and Social Change", Reitz Union, Gainesville, FL, April 1, 2019.
5. Grunwald S. 2019. Mindful communication (6 sessions @ 1 hr.), UF library, Gainesville, FL, Aug. 15, 2019.
6. Adi S.H., S. Grunwald and D.R. de Valle. 2018. A novel method for the inclusion of categorical covariates in latent variable models for factorial modeling of soil carbon in Florida. Soil and Water Sciences Research Forum, Gainesville, FL, Oct. 15, 2018.

7. Mizuta K. and S. Grunwald. 2018. The developmental history of soil concepts. Soil and Water Sciences Research Forum, Gainesville, FL, Oct. 15, 2018.
8. Wilcox K., S. Grunwald, M. Ardelt and T. Irani. 2018. Perceptions, beliefs, and values of soil and its health. Soil and Water Sciences Research Forum, Gainesville, FL, Oct. 15, 2018.
9. Zhou J., M. Deitch, S. Grunwald and B. Pine. 2018. Temporal trend in water salinity of the Suwannee River Estuary and the effects of freshwater supply and sea level rise. Soil and Water Sciences Research Forum, Gainesville, FL, Oct. 15, 2018.
10. Gavilan C., S. Grunwald and R. Quiroz. 2017. Understanding soil organic carbon spatial variability in the Peruvian Central Andes using digital soil mapping. Soil and Water Science Department Research Forum, Gainesville, FL, Sept. 14, 2017.
11. Mizuta K., S. Grunwald, W.P. Cropper, W. Lee, G.M. Vasques and M.A. Phillips. 2016. Prototype development of a new soil index using econometrics method: Data envelopment analysis. Soil and Water Science Department Research Forum, Gainesville, FL, Sept. 15, 2016.
12. Ross C.W., S. Grunwald, J. Vogel, A. Bacon. E.J. Jokela, R. Bracho-Garrillo, M. Akers, J. Cucinella, A. Laviner, D. Markewitz, T. Fox and T.A. Martin. 2016. Data mining reveals relationships between soil carbon and environmental factors at tier 2 sites. Soil and Water Science Department Research Forum, Gainesville, FL, Sept. 15, 2016.
13. Grunwald S. 2016. “Mindfulness session” at the Dean’s retreat, College of the Arts, Infinity Hall, University of Florida, Gainesville FL, June 28, 2016.
14. Grunwald S. and M. Ardelt. 2016. Mindfulness wave. College of Liberal Arts and Sciences (CLAS), Dauer Hall Rm 219, University of Florida, Gainesville, FL, March 16, 2016.
15. Lasseter N. and S. Grunwald. 2016. Mindfulness wave. Agricultural and Biological Engineering (ABE) Department, College of Agricultural and Life Sciences (CALS), Frazier Rogers Hall Rm 122, University of Florida, Gainesville, FL, Feb. 23, 2016.
16. Grunwald S. 2016. Mindfulness wave. College of Health and Human Performance, Florida Gymnasium (FLG) 0245, University of Florida, Gainesville, FL, Feb. 22, 2016.
17. Grunwald S. 2016. The UF Mindfulness program. CALS Solutions Seminar, Straughn Center, University of Florida, Gainesville FL, Jan. 28, 2016.
18. Grunwald, S., M. Ardelt, L. Ritz and N. Lasseter. Workshop session. 2015. Unlocking creativity through mindfulness – the new campus-wide UF Mindfulness program to enhance teaching. College of Agricultural and Life Sciences (CALS) Teaching Enhancement Symposium, Gainesville FL, Aug. 18, 2015.
19. Grunwald S. and M. Ardelt. 2015. The UF Mindfulness Project. UF Mindfulness Day, Gainesville, FL, Sept. 28, 2015.
20. Bodrey Jr. C.R., S.H. Daroub, S. Grunwald, T.A. Obreza, L.M. Risse, and D.E. Radcliffe. 2015. Preliminary analysis for exploring nonpoint source pollution indicator conditions in coastal surface waters of Glynn County, Georgia. Soil and Water Science Department Research Forum, Gainesville, FL, Sept. 17, 2015.
21. Ross C.W., S. Grunwald, S.J. Del Grosso, S. Gerber and E. K. Jokela. 2015. Region-wide Soil Carbon Assessment across “The Land of Pines”. Soil and Water Science Department Research Forum, Gainesville, FL, Sept. 17, 2015.
22. Grunwald S., M. Ardelt, L. Ritz and N. Lasseter. 2015. Unlocking creativity through mindfulness – the new campus-wide UF Mindfulness program to enhance teaching. CALS Teaching Enhancement Symposium, Gainesville, FL, Aug. 18, 2015.
23. Chaikaew P., S. Grunwald, W.G. Harris. 2013. Assessing soil organic carbon change and nutrient loads in surface water in the Suwannee River Basin, Florida. GISDay @ the University of Florida, Gainesville, FL, Nov. 19, 2013.
24. Chaikaew P., A. Hodges and S. Grunwald. 2013. Socio-economic valuation of ecosystem services in the Suwannee River Basin. Soil and Water Science Research Forum, Gainesville, FL, Sept. 6, 2013.

25. Clingensmith C.M., S. Grunwald, S. Wani, A.H. Abd-Elrahman, S.E. Smith and Y. Xu. 2013. Spectral data fusion to infer on soil properties in smallholder farms in India. Innovations for International Development Symposium, UF, Gainesville, FL, May 2, 2013.
26. Xu Y., S. Grunwald, S.E. Smith, A.H. Abd-Elrahman, S. Wani and C.M. Clingensmith. Transformation potential of smallholder agricultural farms using spectral and geospatial technologies. Innovations for International Development Symposium, UF, Gainesville, FL, May 2, 2013.
27. Shakya S., E. Goss, A. van Bruggen, R. Raymundo, S. Asseng, C. Gavilan, S. Grunwald, R. Spagna, J. Stern, A. Devaux and W. Bowen. 2013. Collaboration between the International Potato Centre (CIP) and the University of Florida (UF) to better understand and prioritize climate change adaptation needs for food security in the Andes. EPI Research Day, Feb. 14, 2013.
28. Ross C.W. and S. Grunwald. 2012. Assessing terrestrial carbon dynamics and the effects of climate driven changes on carbon stocks across the southeastern US. Soil and Water Science Research Forum, Gainesville, FL, Sept. 7, 2012.
29. Peter G. and S. Grunwald. 2011. PINEMAP – Mapping the future of southern pine management in a changing world. Florida Climate Institute Annual Event, UF, Gainesville, FL, Nov. 14, 2011.
30. Grunwald S. and B. Hoover. 2011. Data management and sharing – PINEMAP project. Meeting with F. Boteler, Assistant Director, NIFA – Institute of Bioenergy, Climate and Environment, School of Forest Resources and Conservation, UF, Gainesville, FL, Nov. 7, 2011.
31. Xiong X., S. Grunwald, D.B. Myers, W.G. Harris, A. Stoppe and N.B. Comerford. 2011. Transferability of soil carbon models across regions and scales within Florida. Soil and Water Science Research Forum, Gainesville, FL, Sept. 9, 2011.
32. Adewopo J.B., S. Grunwald, P. Chaikaew, B. Cao and X. Xiong. 2011. Performance of global and local models in predicting soil carbon at different scales in a subtropical watershed. Soil and Water Science Research Forum, Gainesville, FL, Sept. 9, 2011.
33. Hong J., S. Grunwald and N.B. Comerford. 2010. Digital soil phosphorus mapping using satellite imagery and ancillary spatial environmental datasets. GISDay @ the University of Florida, Gainesville, Nov. 17, 2010.
34. Kim J., S. Grunwald, T.Z. Osborne and R.G. Rivero. 2010. Multi-scale Modeling of Biogeochemical Soil Properties using Remote Sensing. GISDay @ the University of Florida, Gainesville, Nov. 17, 2010. (1st place poster award).
35. Ross C.W., S. Grunwald, D.B. Myers, N.B. Comerford, and W.G. Harris. 2010. Spatial-Temporal Carbon Assessment within the St. Johns River Basin. GISDay @ the University of Florida, Gainesville, Nov. 17, 2010.
36. Xiong X., S. Grunwald, D.B. Myers, W.G. Harris and N.B. Comerford. 2010. Tree-based modeling of soil organic carbon in the Lake Okeechobee Basin, Florida. GISDay @ the University of Florida, Gainesville, Nov. 17, 2010.
37. Chaikaew P. and S. Grunwald. 2010. A conceptual ecosystem services framework applied to emerging biofuel production systems. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2010.
38. DePatie D.L. Jr., B. Hoover and S. Grunwald. 2010. Mash-ups embedded in online learning material to stimulate learning. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2010.
39. Hoover B., G.M. Vasques, B. Zhong, S. Grunwald, T.A. Martin and D.L. Jr. DePatie. 2010. The Terrestrial Carbon (TerraC) Information System Vers. 1.0. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2010.

40. Kim J., S. Grunwald, T.Z. Osborne and R.G. Rivero. 2010. Multi-scale modeling of soil series using remote sensing. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2010.
41. Myers D.B., S. Grunwald, N.B. Comerford, W.G. Harris and A. Stoppe. 2010. Rapid assessment and modeling of soil carbon storage in Florida. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2010.
42. Ross C.W., S. Grunwald, D.B. Myers and N.B. Comerford. 2010. Modeling of soil organic carbon within the St. Johns River Basin. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2010.
43. Xiong X., S. Grunwald, D.B. Myers and N.B. Comerford. 2010. Modeling of soil organic carbon in dependence of ancillary environmental factors. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2010.
44. DePatie D.L. Jr., B. Hoover and S. Grunwald. 2010. Taking distance education to the next level. CALS Teaching Enhancement Symposium, Gainesville, FL, Aug. 18, 2010.
45. Grunwald S. 2010. Introduction to EcoLearnIT Reusable Learning Object System. Department of Entomology, Gainesville, FL, Jan. 12, 2010.
46. Hoover B., S. Grunwald and K.R. Reddy. 2009. eExtension and eLearning in soil and water sciences. Soil and Water Science Research Forum, Gainesville, FL, Sept. 11, 2009.
47. Kwon H.Y., S. Grunwald, H.W. Beck, Y. Jung, S.H. Daroub and T.A. Lang. 2009. Automatic calibration of ontology-based model for simulating water table fluctuations on farms in the Everglades Agricultural Area. Soil and Water Science Research Forum, Gainesville, FL, Sept. 11, 2009.
48. Myers D.B., S. Grunwald, N.B. Comerford, W.G. Harris and A. Stoppe. 2009. Geospatial soil carbon assessment across Florida – sampling phase complete! Soil and Water Science Research Forum, Gainesville, FL, Sept. 11, 2009.
49. Vasques G.M. and S. Grunwald. 2009. Soil carbon in Florida: Estimates derived from legacy data. Soil and Water Science Research Forum, Gainesville, FL, Sept. 11, 2009.
50. Grunwald S. and B. Hoover. 2009. Workshop session “Empowered learning and instruction through shared learning resources”. CALS Teaching Enhancement Symposium, Gainesville, FL, Aug. 11, 2009.
51. Moore K., S. Grunwald, E. Hanlon and S. Daroub. 2009. Workshop session “How to make a web course more than just narrated Presentations“. CALS Teaching Enhancement Symposium, Gainesville, FL, Aug. 11, 2009.
52. Kwon H.Y., S. Grunwald, H.W. Beck, Y. Jung, S. Daroub, T. Lang and K.T. Morgan. 2008. Ontology-based simulation of daily water table fluctuations on Histosols in the Everglades Agricultural Area. Soil and Water Science Research Forum, Gainesville, FL, Sept. 12, 2008.
53. Hoover B. and S. Grunwald. 2008. Reusable Learning Objects. Soil and Water Science Research Forum, Gainesville, FL, Sept. 12, 2008.
54. Myers D.B., N. Kitchen, K. Sudduth, E. Sadler, R. Miles and S. Grunwald. 2008. Multi-sensor estimation of claypan soil profile properties. Soil and Water Science Research Forum, Gainesville, FL, Sept. 12, 2008.
55. Sarkhot D., S. Grunwald, N.B. Comerford, W.G. Harris and G.L. Bruland. 2008. Development of a strategic sampling design for measuring soil carbon storage and turnover in Florida. Soil and Water Science Research Forum, Gainesville, FL, Sept. 12, 2008.
56. Vasques G.M., S. Grunwald and W.G. Harris. 2008. Estimation of soil organic carbon in the State of Florida using visible/near-infrared spectroscopy. Soil and Water Science Research Forum, Gainesville, FL, Sept. 12, 2008.
57. Grunwald S. 2008. EcoLearnIT – A collection of soil and water science e-learning material based on the concept of Reusable Learning Objects. Soil and Water Science seminar, Gainesville, FL, April 11, 2008.

58. DiGruttolo N., G.M. Vasques, S. Grunwald and J.O. Sickman. 2007. GIS-based assessment of soil carbon storage along soil-land use trajectories. Soil and Water Science Research Forum, Gainesville, FL, Sept. 14, 2007.
59. Vasques G.M., S. Grunwald, J.O. Sickman and N.B. Comerford. 2007. Geospatial modeling of dynamic soil carbon pools at the watershed scale. Soil and Water Science Research Forum, Gainesville, FL Sept. 14, 2007.
60. Vasques G.M. and S. Grunwald. 2007. Florida soil carbon inventory. Soil and Water Science Research Forum, Gainesville, FL, Sept. 14, 2007.
61. Kwon H.-Y., S. Grunwald, H.W. Beck and K.T. Morgan. 2007. A nutrient management plan support system for assessing water and nutrient utilization in Florida sugarcane production. Soil and Water Science Research Forum, Gainesville, FL, Sept. 14, 2007.
62. Morgan K.T., J.Z. Wu, H.W. Beck, Y. Jung and S. Grunwald. 2007. Development and validation of a soil water budget model for citrus irrigation scheduling: A hydraulic conductivity enhanced tipping bucket model. Soil and Water Science Research Forum, Gainesville, FL, Sept. 14, 2007.
63. Hoover B. and S. Grunwald. 2007. Experiences with online collaborative software Adobe Connect - Distance Education Track in Environmental Science. Soil and Water Science Research Forum, Gainesville, FL, Sept. 14, 2007.
64. Grunwald S. 2007. Remote-sensing supported soil mapping in Florida. Florida Cooperative Soil Survey Work Planning Conference. Natural Resources Conservation Service, Gainesville, FL, July 2, 2007.
65. Rivero R.G., S. Grunwald, M.W. Binford and K.R. Reddy. 2006. Development of predictive models of soil phosphorus in Water Conservation Area 2A (Everglades), Integrating remote sensing, GIS and geostatistics. Meeting with the Co-Director Jon Hempel, National Geospatial Development Center and Warren Henderson, State Soil Scientists, Florida, Natural Resources Conservation Service, Gainesville, FL, Nov. 16, 2006.
66. Vasques G.M., S. Grunwald and J.O. Sickman. 2006. Prediction of carbon fractions using visible, near-infrared diffuse reflectance spectroscopy and upscaling to the watershed scale. Meeting with the Co-Director Jon Hempel, National Geospatial Development Center and Warren Henderson, State Soil Scientists, Florida, Natural Resources Conservation Service, Gainesville, FL, Nov. 16, 2006.
67. Vasques G.M., S. Grunwald and J.O. Sickman. 2006. Assessment of total, stable and labile carbon using visible, near-infrared diffuse reflectance spectroscopy. Soil and Water Science Research Forum, Gainesville, FL, Sept. 15, 2006.
68. Grunwald S. and B. Hoover. 2006. A digital repository of Reusable Learning Objects - EcoLearnIT. Soil and Water Science Research Forum, Gainesville, FL, Sept. 15, 2006.
69. Grunwald S. 2006. Digital Soil Mapping in Florida. Florida Cooperative Soil Survey Work Planning Conference. Natural Resources Conservation Service, Gainesville, FL, July 18, 2006
70. Grunwald S. 2006. Geospatial modeling of soil-landscapes. Soil and Water Science Department, UF, Gainesville, FL, June 23, 2006.
71. Lamsal S., S. Grunwald, G.L. Bruland, C.M. Bliss and N.B. Comerford. 2006. Geospatial footprints of nitrogen mapped across the Santa Fe River Watershed in Florida. IFAS Research Forum, University of Florida, Gainesville, FL, March 24, 2006.
72. Rivero R.G., S. Grunwald, S. Newman, T.Z. Osborne and K.R. Reddy. 2006. Quantitative geospatial mapping of soil phosphorus in Water Conservation Area 2A, Everglades. IFAS Research Forum, Gainesville, FL, March 24, 2006.
73. Grunwald S. 2006. Experiences with teaching tools to support online education. Distance, Continuing & Executive Education Advisory Group, UF, Gainesville, FL, March 2, 2006.
74. Grunwald S. 2006. Assessment of environmental quality using geostatistics and hybrid models. Geospatial Research Forum, University of Florida, Gainesville, FL Sept. 25, 2006.

75. Comerford N.B., S. Grunwald, C.M. Bliss, D.A. Graetz and G.L. Bruland. 2005. Geospatial modeling of soil nitrogen in a mixed-use watershed. Florida Forest Association - Environmental Committee, Lake City, FL, Oct. 26, 2005.
76. Grunwald S. 2005. Distance education programs - Soil and Water Science Department, UF. South Regional Chairs Meeting (SRAC), Gainesville, FL, Aug. 24, 2005.
77. Grunwald S. 2005. Breeze Live for distance and international distance education. College of Agricultural and Life Sciences (CALS) Teaching Workshop – Creating Virtual Labs, Gainesville, FL, Aug. 16, 2005.
78. Grunwald S. 2005. Overview of the Soil and Water Science Distance Education Graduate Program. Agricultural and Biological Engineering Department Teaching Retreat, Austin Carey Forest, FL, May 11, 2005.
79. Grunwald S., S. Lamsal, A. Sabesan, G.M. Bliss, G.L. Bruland, N.B. Comerford and M.W. Clark. 2005. Quantitative soil-landscape modeling: a case study in the Santa Fe River Watershed. Seminar presentation Agriculture and Biological Engineering Department, Univ. of Florida, Gainesville, FL, Jan. 27, 2005.
80. Bruland G.L., C.M. Bliss, S. Grunwald, N.B. Comerford, and D.A. Graetz. 2005. Contrasting soil nitrate-nitrogen across land-uses and soil orders in a north-central Florida watershed. SWS Department Research Forum, Gainesville, FL, Sept. 2, 2005.
81. Lamsal S., S. Grunwald, C.M. Bliss, G.L. Bruland and N.B. Comerford. 2005. Regional modeling of soil nitrate-nitrogen with auxiliary environmental datasets in the Santa Fe River Watershed. SWS Department Research Forum, Gainesville, FL, Sept. 2, 2005. *Graduate student Sanjay Lamsal won poster award.*
82. Hoover B., S. Grunwald and N.B. Comerford. 2005. Educational technologies supporting soil and water science graduate programs. SWS Department. Research Forum, Gainesville, FL, Sept. 2, 2005.
83. Rivero R.G., S. Grunwald, T.Z. Osborne, K.R. Reddy and S. Newman. 2005. Incorporation of Aster satellite imagery into geospatial modeling of soil total phosphorus in Water Conservation Area 2A. SWS Department. Research Forum, Gainesville, FL, Sept. 2, 2005. *Graduate student Rosanna Rivero won poster award.*
84. Bliss C.M., I. Lopez-Zamora, N.B. Comerford, S. Grunwald, E. Jokela and E. Barnard. 2005. Spatial distribution of nitrogen and carbon in soil size fractions in pine plantations affected by poultry emissions. SWS Department. Research Forum, Gainesville, FL, Sept. 2, 2005.
85. Clark M., K.A. McKee, S. Grunwald, K.R. Reddy and E. Dunne. 2005. Hydrologic restoration of isolated wetlands in the Okeechobee watershed: an integrated approach to reduce phosphorus loads to the lake. Workshop “Ongoing Activities in the Okeechobee Basin” at the Buck Island AgroEcology Center, Florida, Febr. 11, 2005.
86. Grunwald S. 2004. The Florida soil characterization database. Florida Cooperative Soil Survey Work Planning Conference, Natural Resource Conservation Service (NRCS), Gainesville, FL, Aug. 19, 2004.
87. McKee K.A., S. Grunwald, M.W. Clark and S. Newman. 2004. Landscape-scale phosphorus prediction in isolated agricultural wetlands: GIS, remote sensing and classification trees. IFAS Research Forum, March 2004.
88. McKee K.A., S. Grunwald, M.W. Clark and S. Newman. 2004. Geo-spatial upscaling techniques for wetland phosphorus storage. SWS Department Research Forum, Gainesville, FL, Sept. 2, 2004.
89. Bruland G.L., R.G. Rivero, R. Corstanje, S. Grunwald, T.Z. Osborne, K.R. Reddy and S. Newman. 2004. Spatial distribution of total soil phosphorus in the Greater Everglades ecosystem. SWS Dept. Research Forum, Gainesville, FL, Sept. 2, 2004.
90. Lamsal S., S. Grunwald, C.M. Bliss, I. Lopez-Zamora, N.B. Comerford, M.W. Clark and G. W. Hurt. 2004. Spatial upscaling of site-specific nitrate-nitrogen measurements to the

watershed scale in the Santa Fe River Watershed. SWS Department Research Forum, Gainesville, FL, Sept. 2, 2004.

91. Grunwald S. 2004. Update of soil mapping activities at the UF. Florida Cooperative Soil Survey Work Planning Conference, Natural Resource Conservation Service (NRCS), Gainesville, FL, Aug. 26, 2004.
92. Osborne T.Z, M.W. Clark, S. Grunwald, W. Newman and K.R. Reddy. 2003. Spatial sampling of soils in the Everglades ecosystem. UF South Florida Ecological Restoration Research and Outreach Meeting, School of Natural Resources and Environment, Gainesville, FL, Oct. 29, 2003.
93. Mathiyalagan V., S. Grunwald, S.A. Bloom and K.R. Reddy. 2003. A web-based geo-information and visualization tool for Florida's wetlands. UF South Florida Ecological Restoration Research and Outreach Meeting, School of Natural Resources and Environment, Gainesville, FL, Oct. 29, 2003.
94. Mathiyalagan V., S. Grunwald, S.A. Bloom and K.R. Reddy. 2003. A web-based geo-information and visualization tool for Florida's wetlands. Soil and Water Science Departmental Research Forum, Gainesville, FL, Sept. 4, 2003.
95. Ramasundaram V., S. Grunwald, A. Mangeot, C.M. Bliss, N.B. Comerford and G.W. Hurt. 2003. Bridging the gap between computer science & soil and water science. Soil and Water Science Departmental Research Forum, Gainesville, FL, Sept. 4, 2003.
96. Sabesan A., S. Grunwald, M.W. Binford and M.W. Clark. 2003. Linking land use dynamics to soil and water quality using geographic techniques. Soil and Water Science Departmental Research Forum, Gainesville, FL, Sept. 4, 2003.
97. Lamsal S., S. Grunwald, N.B. Comerford, D.A. Graetz, K.M. Portier, W.G. Harris and G.W. Hurt, G. 2003. Development of holistic, quantitative soil-landscape models in north-eastern Florida. Soil and Water Science Departmental Research Forum, Gainesville, FL, Sept. 4, 2003.
98. Liu H., S. Grunwald , H.W. Beck, T.A. Obreza and J.M.S. Scholberg. 2003. Concepts for an innovative object-oriented decision support tool for nutrient management in citrus groves. Soil and Water Science Departmental Research Forum, Gainesville, FL, Sept. 4, 2003.
99. McKee K.A., S. Grunwald, M.W. Clark, S. Newman and K.R. Reddy. 2003. Predicting total phosphorus in isolated wetlands at a basin-wide scale. Soil and Water Science Departmental Research Forum, Gainesville, FL, Sept. 4, 2003.
100. Grunwald S. and K.R. Reddy. 2003. The Distance Education Graduate Track in Environmental Science. Soil and Water Science Research Forum, Gainesville, FL, Sept. 10, 2003.
101. Grunwald S. 2003. Update of soil mapping activities at the UF. Florida Cooperative Soil Survey Work Planning Conference, Natural Resource Conservation Service (NRCS), Gainesville, FL, Aug. 20, 2003.
102. Grunwald S. and K.R. Reddy. 2003. The Distance Education Graduate Track in Environmental Science. The Agriculture and Natural Resources Career Day, Gainesville, FL, Febr. 5, 2003.
103. Grunwald S. 2002. An interactive webGIS framework for data sharing and soil-landscape analyses. 3rd Annual Soil and Water Science Departmental Research Forum, University of Florida, Gainesville, FL, Sept. 5, 2002.
104. Grunwald S. and K.R. Reddy. 2002. The Distance Education Graduate Track in Environmental Science. Soil and Water Science Research Forum, Gainesville, FL, Sept. 2002.

105. Mangeot A., S. Grunwald and K.R. Reddy. 2002. Reconstruction and visualization of 3D soil-landscape models. 3rd Annual Soil and Water Science Departmental Research Forum, University of Florida, Gainesville, FL, Sept. 5, 2002.
106. Grunwald S. 2002. Update of soil mapping activities at the UF. Florida Cooperative Soil Survey Work Planning Conference, Natural Resource Conservation Service (NRCS), Gainesville, FL, Aug. 26, 2002.
107. Grunwald S. and K.R. Reddy. 2002. The Distance Education Graduate Track in Environmental Science. UF IFAS Graduate Research Symposium, Gainesville, FL, March 2002.
108. Grunwald S. 2001. Landscape modeling and soil surveying. MO-15 Soil Scientist Workshop – Natural Resource Conservation Service (NRCS), Gainesville, FL, Nov. 6-8, 2001.
109. Grunwald S. 2001. Soil-landscape modeling. Florida Cooperative Soil Survey Work Planning Conference, Natural Resource Conservation Service (NRCS), Gainesville, FL, Aug. 14, 2001.

Teaching

– **Main instructor of courses:**
Current offerings:
  - SWS 6722 Soil Landscape Modeling—Integrative Ecosystem Modeling (spring semester odd years; on-campus and distance education graduate course)
  - SWS 5721C GIS in Land Resource Management (fall semester even and odd years; on-campus and distance education graduate course, course includes labs)
  - SWS 6905 Special Problems (spring semester 2023)
  - SWS 6950 Professional Development Soil, Water, and Ecosystem Science (fall semester 2021).

  Previously taught:
  - SWS 4720C GIS in Soil and Water Science (on-campus and distance education undergraduate course, course incl. labs)
  - ALS 5027 Reusable Learning Objects (distance education graduate course)
  - Co-teaching of graduate course in Morphology, Classification and Mapping of Soils (University of Wisconsin-Madison)

– **Workshops and Short Courses taught:** Reusable Learning Objects, Terrestrial Carbon Information System, Diffuse Reflectance Spectroscopy for Soil Characterization, and Introduction to Geographic Information Systems.

– **Guest lectures:** SWS 5132 Tropical Soil Management, SWS 6932 Techniques in Biogeochemistry, SWS 6448 Biogeochemistry in Wetlands, ABE 4932 Computers in Agriculture and Resource Management, SWS 4116/5115 Environmental Nutrient Management, and REL 3938 Global Religions in the U.S.

Teaching Evaluations

Evaluation of Courses taught by Grunwald and Comparison with Department, College, and University Course Scores

Rating scale: 5 = excellent; 4 = above average; 3 = average; 2 = below average; 1 = poor

Course*	Mode[1]	Term[2]	#E / #R[3]	Grunwald Overall (Means)[4]		College CALS Overall (Means)[4]		University Average	
				I	C	I	C	I	C
SWS 5721C**	OC & DE	Fa 2022	20/7	4.55	4.43	N/A	N/A	N/A	N/A

GIS in Land Resource Management	OC & DE	Fa 2021[&]	19/9	4.07	4.08	4.46	4.28	3.44	3.89
	DE	Fa 2020	12/7	4.74	4.57	4.45	4.26	4.34	4.18
SWS 6722 Soil-Landscape Modeling***	DE	Sp 2021	53.4%[$]	4.57	4.39	4.42	4.24	4.35	4.19

* Note: The University of Florida changed the evaluation system and Dept. averages are no longer provided. Instead, university averages are used as reference standard.

** Lab-based course,

*** In Spring 2021 this course was converted from on-campus to online (DE) course due to COVID-19 restrictions.

[$] Response ratio.

[&] The lab component was completely revised to accommodate the shift to the centralized UF Apps system and ArcGIS Pro software compared to previous CALS virtual computer lab and ArcGIS Desktop software. The UF Apps platform is slower and has several technical issues with R and M sharedrives.

Evaluations before Fall 2020 (UF Used Different Student Evaluation Criteria)

Rating scale: 5 = excellent; 4 = above average; 3 = average; 2 = below average; 1 = poor

Course	**Mode[1]**	**Term[2]**	**#E / #R[3]**	**Grunwald Overall (Means)[4]**		**Department Overall (Means)[4]**		**College Overall (Means)[4]**	
				I	**C**	**I**	**C**	**I**	**C**
SWC 6722 Soil-Landscape Modeling	OC	Sp 2015	7/5	4.40	4.00	4.41	4.29	4.43	4.37
	OC	Sp 2011	5/5	5.00	5.00	4.40	4.54	4.36	4.45
	OC	Sp 2009	7/6	4.80	4.50	4.41	4.16	4.42	4.23
	OC	Sp 2006	8/8	4.50	4.38	4.62	4.45	4.41	4.21
SWS 6932 Reusable Learning Objects	DE	Sp 2013	4/2	4.58	4.46	4.35	4.24	4.36	4.25
	DE	Sp 2012	5/2	4.81	4.81	4.50	4.31	4.41	4.19
	DE	Su 2011	5/2	N/A	N/A	N/A	N/A	N/A	N/A
	DE	Sp 2011	5/4	4.75	4.75	4.41	N/A	4.08	N/A
	DE	Su 2010	2/0	N/A	N/A	N/A	N/A	N/A	N/A
	DE	Sp 2010	2/5	N/A	N/A	N/A	N/A	N/A	N/A
	DE	Fa 2009	3/3	4.50	4.50	4.59	4.47	4.34	4.14
SWS 5721C (former: SWS5720C) GIS in Land Resource Management Lab-based course	OC	Fa 2019	11/8	4.73	4.53	4.45	4.26	4.38	4.16
	DE	Fa 2019	9/0	N/A	N/A	N/A	N/A	N/A	N/A
	OC &DE	Fa 2018	13/8	5.00	N/A	4.49	N/A	4.51	N/A
	OC	Fa 2017	8/4	4.56	4.22	4.39	4.20	4.51	4.41
	DE	Fa 2017	8/5	4.40	4.01	4.59	4.52	4.44	4.36
	OC	Fa 2016	11/6	3.13	3.75	4.41	4.31	4.53	4.43
	DE	Fa 2016	7/0	N/A	N/A	N/A	N/A	N/A	N/A
	OC	Fa 2015	8/5	3.85	3.77	4.47	4.38	4.53	4.46
	DE	Fa 2015	9/0	N/A	N/A	N/A	N/A	N/A	N/A
	OC	Fa 2014	10/6	4.50	4.60	4.40	4.38	4.47	4.41
	DE	Fa 2014	12/0	N/A	N/A	N/A	N/A	N/A	N/A
	OC	Fa 2013	7/4	4.67	4.67	4.47	4.45	4.47	4.39
	DE	Fa 2013	6/1	4.67	4.67	4.52	4.45	4.50	4.39
	OC	Fa 2012	15/8	4.43	4.29	4.49	4.40	4.30	4.18
	DE	Fa 2012	10/6	4.43	4.49	4.49	4.40	4.30	4.18
	OC	Fa 2011	19/15	4.28[5]	4.40[5]	4.52	4.45	4.29	4.27
	DE	Fa 2011	20/13	4.59[5]	4.60[5]	4.52	4.45	4.29	4.27
	OC	Fa 2010	16/13	4.38[5]	4.54[5]	4.67	4.49	4.29	4.38
	DE	Fa 2010	20/11	4.10[5]	4.27[5]	N/A	N/A	N/A	N/A
	OC	Fa 2009	20/20	4.55	4.55	4.59	4.47	4.34	4.14
	DE	Fa 2009	20/6	4.33	4.50	4.59	4.47	4.34	4.14
	OC	Fa 2008	15/9	4.44[6]	4.50[6]	4.55	4.35	4.35	4.16
	DE	Fa 2008	20/8	4.74[6]	4.83[6]	4.55	4.35	4.35	4.16
	OC	Fa 2007	15/12	4.91	4.83	4.62	4.45	4.32	4.12

	DE	Fa 2007	18/10	4.20	4.20	4.28	4.17	4.32	4.12
	OC	Fa 2006	19/14	4.43	4.43	4.56	4.41	4.30	4.10
	DE	Fa 2006	27/2	5.00	5.00	4.56	4.41	4.30	4.10
	OC	Fa 2005	13/11	4.55	4.45	4.47	4.33	4.39	4.17
	DE	Fa 2005	10/3	5.00	5.00	4.47	4.33	4.39	4.17

[1] Modes – OC: on-campus course; DE: distance education course,
[2] Term – Sp: Spring semester; Su: Summer semester; Fa: Fall semester; numbers: year.
[3] #E: Number of enrollment, #R: Number of respondents,
[4] I: Instructor and C: Course overall evaluations,
[5] CALS computer lab constrained the lab component of the course (computers in the computer lab are slow and outdated; the virtual machines hardware limited the speed to run ArcGIS that students use to perform assignments),
[6] In Fall 2008 semester there were severe technical problems with the virtual computer lab and ArcGIS software (managed by CALS Computer Teaching Lab) that impacted teaching for about 4 weeks+
Note: Only sections with 2+ students enrolled are reported.

Advising, Mentoring, and Supervision

- **Major faculty advisor of 16 Ph.D. students (graduation dates):** H.S. Adi (2018), P. Chaikaew (2014), B. Cao (2015), C.M. Clingensmith (2021), J. Hong (2011), J. Kim (2012), S. Lamsal (2006), K. Mizuta (2020), R.G. Rivero (2006), C.W. Ross (2017), G.M. Vasques (2009), X. Xiong (2013), Y. Xu (2018), Jiahua Zhou (2022). Major faculty advisor of Ph.D. students: C. Gavilan (8/2012-3/2020 non-thesis), K. Wilcox (6/2014-3/2020).
  - Current Co-Advisor of Ph.D. students: Perseveranca Mungofa (SWES); Saman Rabiei (SWES).
- **Major faculty advisor of 10 M.S. students (graduation dates):** B. Fungo (2011), T. Kapner (2008), K. McKee (2008), K. Lockhart (2012), J. McKay (2008), K. Mizuta (2016), H. Keskin (2015), C.W. Ross (2011), A. Sabesan (2004), John Sydney (2022).
  - Current Major faculty advisor of M.S. students: Alejandro Arteaga Garcia (SWES).
- **Member of 15 Ph.D. student supervisory committees (graduation dates):** D. Godwin (2012), L. Igelisias (2018), L. Lopez (2019), L. Loudermilk (2010), M. McKenney (2008), D.B. Myers (2008), T. Nyoike (2012), J. Pachon (2018-2021), A. Pauly (2007), R. Raymundo (2016), E. Rhodes (2010), J.M. Shine, C. Staub (2014), J. Taylor (2011), J. Yunchul (2013), Taciara Zhorowski Horst-Heinen (Department of Soil Science, Federal University of Santa Maria, Brazil; 2022).
  - Current member of Ph.D. student committee: Marice Lopez (IFAS, Entomology), Tyler S. Nesbit (IFAS, Family, Youth, and Community Sciences), and Nádia Mariane Mucha, Departamento de Solos e Engenharia Agrícola, Universidade Federal do Paraná, Brazil.
- **Member of 16 M.S. student supervisory committees (graduation dates):** J.P.N. Anne (2013), C. Arrieta (2006), C.R. Bodrey (2015), D. Butler (2008), C.J. Cappiello (2019), B. Carr (2020), L. Clark (2008), H. Claudio (dropped), R. Cox (2014), Erin Josephitis (2021), E. Meerschman (2009), V. Nazareth (2016), T. Roberts (2011), C. Staub (2011), K.M. Wallace (2017), S. Whitney (2010).
  - Current member of M.S. committee: Natalie Carter (SWES).
- **Coaching of group of students** (8/2013-8/2017). Topics incl. student leadership (role play), transformational engagement in meetings, effective collaboration to develop grant proposals. Coaching of students to develop a proposal for the National Agricultural Innovation Prize Powered by 40 Chances "Finding Hope in a Hungry World" by the Howard G. Buffett Foundation and UW-Madison (2014 competition).

- **Mentor and Coach of faculty members:**
  - Yao-Chin Wang, Assistant Professor in AI, Department of Tourism, Hospitality and Event Management, College of Health and Human Performance, UF (8/2021 to present).
- **Supervision of 11 scientific/technical staff members:**
  - Khori Battle PINEMAP project data manager and programmer (11/2014 to 8/2015).
  - Rosvel Bracho-Garrillo, PINEMAP project data manager (5/2015 to 2/2017).
  - Brandon Hoover, Database Manager Pinemap project (10/2011 to 5/2014).
  - May Dolen, Project Assistant (7/2014 to present).
  - Dr. Congrong Yu, soil-ecological modeling (Project: Assess the transferability and scalability of soil spectral carbon models) (12/2011 to 12/2013).
  - Dr. Risa Patarasuk, GIS Specialist (Project: Geographic modeling of pine tree response along climatic and ecological trajectories in the southeastern U.S.) (5/2012 to 1/2013).
  - Advised David DePatie, Distance Education Staff, Soil and Water Sciences Department (5/2010 to 5/2011).
  - Brandon Hoover, SWS Department DE Specialist (5/2005 – 10/2011).
  - Technical staff members: Ron Jessup (2001), Steve A. Bloom (2001 – 2006), and William Deich (2006 – 2007) (IT Specialists), who managed the hardware and software in my Core GIS Research Computer Laboratory.
- **Advisor of 12 Post-Doctoral Associates:**
  - Dr. Xiong Xiong (10/2013 – 8/2014). Project: Soil carbon assessment across the U.S.
  - Dr. Nichola M. Knox (11/2010 –11/2011). Projects: Carbon assessment in dependence of environmental and anthropogenic forcings in Florida & the conundrum of validation in ecological modeling.
  - Dr. Biao Zhong (5/2010 – 2/2011). Project: Development of a Terrestrial Carbon Information System
  - Dr. Gustavo M. Vasques (8/2009 – 2/2010). Project: Modeling of carbon dynamics across multiple spatial scales & development of the Terrestrial Carbon Information System
  - Dr. D. Brenton Myers (8/2008 – 10/2010). Project: Geospatial soil and spectral modeling of soil carbon in the State of Florida
  - Dr. Deoyani Sarkhot (9/2007 – 2/2009). Project: Soil carbon assessment using geospatial methods and spectral modeling of carbon pools. Current employment: Post-Doctoral Associate at University of California-Merced
  - Dr. Ho-Young Kwon (11/2006 – 6/2010). Project: Object-oriented modeling of phosphorus transport in various Florida cropping systems
  - Dr. Gregory L. Bruland (6/2004 – 12/2005). Projects: Geo-temporal modeling of soil nitrogen in the Santa Fe River Watershed and spatially-explicit modeling of biogeochemical properties in Water Conservation Area 3, Everglades. Current employment: Assistant Professor, University of Hawai'i

- Dr. Ronald Corstanje (10/2004 – 5/2005). Project: Geostatistical modeling of the spatial distribution of biogeochemical soil and environmental properties in subtropical wetlands. Current employment: Assistant Professor/Scientists, Cranfield University, UK
- Dr. Thomas F.A. Bishop (7/2002 – 7/2003). Project: Geo-spatial soil mapping in the Greater Everglades. Current employment: Senior Lecturer in Environmetrics, Faculty of Agriculture, Food and Natural Resources, University of Sydney, Australia
- Dr. Tamara A. Shatar (11/2002 – 7/2003). Project: Geo-temporal modeling of soil nitrogen in the Santa Fe River Watershed
- Dr. Christine M. Bliss (9/2002 – 12/2005) [shared advising]. Projects: To investigates the relationships between nitrogen in soils, foliage, throughfall and the atmosphere in *Pinus elliottii* adjacent to poultry operations that showed incidence of pitch canker; and geo-temporal modeling of soil nitrogen in the Santa Fe River Watershed.

– **Undergraduate advising:** Dr. Grunwald advised visiting undergraduate student (Gustavo M. Vasques), Brazil, funded through the Program for the Improvement of Post-Secondary Education – U.S. Dept. of Education and CAPES (Brazil's Ministry of Education). Supervised project: Assessment of the spatial distribution and variability of nitrogen in soils, litter, throughfall, and foliage in *Pinus elliottii* (slash pine) stands adjacent to poultry operations (Fall semester 2003 – Spring semester 2004).

– **Supervisor of 3 UF Mindfulness Student Interns:**
- Henok Pankhurst (9/2019 to 7/2020).
- Katharina Lippert (11/2020 to 5/15/2021).
- Caroline Murray (8/2020 to 1/2/2021).

– **Supervision of 1 high school student:**
- Christine Hwang, Student Science Training Program, UF (6/2014 to 8/2014).

– **Advisor of 9 U.S. visiting scientists hosted by Grunwald:**
- Dr. Brendan Malone (Commonwealth Scientific and Industrial Research Organization, CSIRO, Australia). Sabbatical: Soil proximal sensing and soil sampling optimization (8/2023 – 8/2024).
- Ph.D. student An-Min Wu (Soil Science Program, University of Minnesota). Project: Geospatial analysis and soil carbon modeling in southern MN (2/2012 and 3/2012).
- Hosted Dr. Susan Miyasaka's (Professor, University of Hawai'i) sabbatical with Grunwald's research team (Spring semester 2012).
- Dr. Cleiton Sequeira (Post-Doc) from the National Soil Survey Center, Lincoln, NE. Project: Development of spectral soil carbon models in R (7/2011).
- Dr. Meryl McDowell (Post-Doc) from the University of Hawai'i. Project: Chemometric modeling of spectral soil data in R (6/2011).
- UF graduate student Anissa Karim: Project: GIS and development of a spatial sampling design for an ecological study (Spring semester 2004).
- Advised a group project conducted in Fall 2003 semester by 3 Computer Science and Engineering (CISE) UF students (Vinay Ramasundaram, Syed Iqbal, and Inkwan Yu) to learn about project planning for a computer science project as part of course CEN 6075 Software Specifications.

- Graduate students CISE-UF Brian Weinrich, 7/2003 – 1/2004. Project: Spatial mapping of biogeochemical properties.
- M.S. student CISE-UF Vijay Mathiyalagan, 1/2002 – 12/2003. Project: 3D geospatial modeling and web programming.

– **Advisor of 27 visiting scientists/research scholars hosted in Dr. Grunwald's lab from**: Denmark, Brazil, Burkina Faso, Belgium, China, Columbia, France, India, Peru, Spain and the United Kingdom.

- Ph.D. student and visiting scholar Taciara Zborowski Horst-Heinen from the Federal University of Santa Maria, Brazil (12/2019 – 6/2020).
- Visiting scholar Decai Wang, Associate Professor (12/2016 – 12/2017) from Henan Agricultural University, China.
- Visiting scientist, Dr. Huilong Lin, Professor and Dean, Department of Agricultural and Forestry Economics and Management, Director of the State Key Laboratory of Grassland Agro-ecosystems, College of Pastoral Agriculture Science and Technology, Lanzhou University, China (2/2016 to 9/2016).
- Ph.D. student Chong Wang, Lanzhou University, Lanzhou, China (9/2014 to 9/2016).
- Ph.D. student André Dotto Carnieletto, Federal University of Santa Maria, Santa Maria, Brazil (12/2014 to 12/2015).
- Hosted in my lab visiting scientists Dr. Marcos Ceddia and Dr. Érika Flávia Machado Pinheiro from the Rio de Janeiro Federal Rural University, Rio de Janeiro, Brazil (8/2014 to 8/2015). Both Professors were on sabbatical.
- Ph.D. student Yi Peng, visiting scientist from Aarhus University, Denmark (11/2013 to 3/2014).
- Ph.D. student Likai Zhu, GIS Specialist. Project: Development of a geospatial database for the Andes, Peru (8/2013 to 12/2013).
- Ph.D. student Bei Zhang funded through the Chinese Scholarship Program (sandwich program: 2 yrs studies at UF from 8/2012 to 8/2014; plus studies in China).
- Hosted international visitor Dr. Adolfo Posadas from the International Potato Center (CIP), Lima Peru / Embrapa, Sao Paulo, Brazil for a research exchange visit (2/2012).
- Provided training in the development of Reusable Learning Objects to visiting scientist, Dr. Sandhya Shenoy from National Academy of Agricultural Research Management (NNARM), Hyderabad, Andhra Pradesh, India (2/2010).
- Provided training in the development of Reusable Learning Objects to two visiting scientists from Tamil Nadu Agricultural University, Coimbatore, India (Dr. Manickam Sengodan and Dr. Palaniappan Balasubramaniam) (2/2010).
- Ph.D. student Eef Meerschman from Ghent University, Belgium (8/2008).
- Mentored six visitors from Indian Agricultural Universities, Indian Council of Agricultural Research (ICAR) and ICRISAT on the development of Reusable Learning Objects (e-learning material) focused on efficient water management (2/2008).
- Visiting scholar Yvonne Cohen from the University of Wales, Bangor, UK (10/2006).
- Undergraduate student Andre Moura, Universidade Federal de Vicosa, Brazil (Spring semester 2006).

- Fellow Nomé Sakané, Bazega, Burkina Faso, Africa; funded by the Borlaug Int. Agricultural Science and Technology Fellows Program (10/2005).
- Graduate student Marianela Rodríguez, Universidad de la Laguna, Tenerife, Spain; supervised project: Kriging and co-kriging of soil properties in Tenerife (9/2004 – 11/2004).
- Graduate student Martha Otello, Centro Internacional de Agricultura Tropical (CIAT), Cali, Columbia on geographic information systems (SOS 5720C). Project: Modeling of non-point source pollution in a watershed in Columbia (Fall semester 2004).
- Undergraduate student Gustavo M. Vasques, Brazil, funded through the Program for the Improvement of Post-Secondary Education – U.S. Dept. of Education and CAPES (Brazil's Ministry of Education) (Fall semester 2003 – Spring semester 2004).
- Visiting scholar Adrien Mangeot, National School of Geographic Sciences and Curie University, Marne La Vallee / Paris, France (Spring 2002 semester). Project: 3D geospatial modeling. The project was continued by a UF-CISE graduate student Vinay Ramasundaram (6/2002 to 6/2004).

– **Grunwald served on the following mentoring committees:**

- Dr. Allan Bacon, tenure-track faculty in the Soil and Water Sciences Dept. UF (2018 – present)
- Dr. Gurpal Toor, tenure-track faculty in Soil and Water Sciences Dept. UF (2007 – 2014)
- Dr. Senthold Asseng, Associate Professor in Agricultural and Biological Engineering Dept. UF (2011 – 2014)

Leadership and Service in Distance Education

– Dr. Grunwald served as the **Director and Coordinator of Distance Education** in the Soil and Water Sciences Department (UF) from 2001-2011. She developed a new M.S. distance education program in Environmental Science (enrollment in 2011: 61 full-time students; and non-degree seeking/part-time students enrolled in online courses) and three graduate certificate programs. She was responsible for the coordination of all distance education courses, guidance of distance education students and served as the liaison between students, Department Chair and Dean in the Institute of Food and Agriculture, UF.

– The *Graduate DE Track in Environmental Science (M.S.)* was launched in Fall 2002 (thesis and professional M.S.). To promote the program Dr. Grunwald assisted in launching a web site and promotional materials (brochures, handouts, posters, and Power Point presentations).

– A hybrid (mixed online/on-campus) *Ph.D. Program in Environmental Science* was introduced ~ Fall 2005.

– Online (live, interactive) *orientations* for incoming DE students were offered by Grunwald at the beginning of Spring and Fall semesters (2003 – 2011).

– The online graduate portfolio developed by Dr. Grunwald was ahead of the curve of massive online course and program developments in the U.S. (2010 – present). A long-term goal was to build collaborative programs with other institutions that offer similar online programs in soil, water and/or environmental sciences including the Ohio State U, Auburn U, and North Carolina State U.

– The DE Environmental Science graduate program was involved in the international project 'Strengthening Agricultural and Environmental Capacity through DE' (collaboration with Int.

Center for Tropical Agriculture, CIAT, in Columbia, Makerere U in Uganda, U of Nairobi in Kenya, and others).

- *Number of students* enrolled in DE Graduate Track in Environmental Sciences:
  - Spring 2005: 24 M.S. students
  - Spring 2009: 51 M.S. and 10 Ph.D. students
  - Spring 2011: 65 M.S. and 5 Ph.D. students
  - Graduations of students (2005 – 2011): 23
  - Admission of new DE students 2010: 32
- *Retention efforts* entailed to answers student's questions enrolled in the DE graduate and/or certificate programs about Plan of Study, course offerings, thesis projects, and others.
- In Spring semester 2008 Dr. Grunwald coordinated the launch of three new *Graduate Certificates* (on-campus and DE modes) offered by the SWS Department: (1) Sustainable Land Resource and Nutrient Management; (2) Soil Ecosystem Services; and (3) Wetland and Water Resource Management.
- Growth of certificate programs:
  - Students' registrations 2008: 10; 2009: 24; and 2010: 52.

Creative Work in Education

- Dr. Grunwald was member of the UF Task Force First Experience of the UF Core Program to restructure General Education (5/2016 – 5/2019)
- Member of the *Open Agricultural Curriculum and Learning Initiative (AgroCuri)* to develop an Agroecology curriculum implemented in form of learning objects. AgroCuri is an international consortium of scientists/instructors from various universities and Consultative Group on International Agricultural Research (CGIAR) centers (U.S., Europe, south-east Asia, and Africa). AgroCuri is supported by a seed grant funded by the Bill and Melinda Gates Foundation (8/2008 – 8/2016).
- Member of the *International Agricultural Learning Repositories Task Force (AgLR-TF)*, which provides guidance, standards, technologies, tools, and recommendations for development of digital repositories of e-learning materials around the globe (global consortium) (2/2008 – 2/2016).
- Dr. Grunwald worked with representatives from North Carolina State U, the Ohio State U, U of Kentucky and Texas Tech U to develop a *M.S. Soil, Water and Environmental Sciences* as part of the national Agricultural Interactive Distance Education Alliance (AG*IDEA) (2009).
- Grunwald was Co-PI of the *international capacity building project* "Information and Communication Technologies for Capacity Building in Water Management: U.S. India Collaborative Extension/Outreach and DE" funded by U.S. India Agricultural Knowledge Initiative, which culminated in the development of the EcoLearnIT RLO system (9/2006 – 9/2009).
- She is engaged in the *international initiative to improve livelihood and education in Africa* – Strengthening Agricultural and Environmental Capacities through DE (SAC-DE). Partners in this USAID funded program are UF, Nairobi U (Kenya), Makerere U (Uganda), CIAT, and Commonwealth of Learning (COL) (8/2004 – 8/2010).
- She is a member of the *UF Distance Learning Council* to share knowledge on effective teaching, e-learning tools, and online courses/curricula at UF (2006 – 2012).

- She participated in *Southeast Distance Education Consortium* meeting, Nov. 28-29, 2006, Atlanta, GA. The meeting sought to initiate the formation of an alliance of academic institutions in the south-eastern U.S. offering distance education courses, graduate programs and graduate certificates (which later became the AG*IDEA).
- Dr. Grunwald is a regular speaker at *national and international educational meetings* including the Sloan Int. Online Education meeting (2007); Int. Conference on Education and Information Systems: Technologies & Applications (2005); Annual Conference on Distance Teaching and Learning (2005); (ii) Conference on DE Teaching and Learning in Madison, WI, Aug. 4-6, 2004; and (iii) North American Colleges and Teachers of Agriculture Conference (NACTA) (2004), and others.
- Based on her expertise in distance education and instruction she has been *invited to give talks* at numerous occasions (u.a., Florida State Horticultural Society and Soil and Crop Science Society of Florida meeting (2009), Ohio State University, School of Environment and Natural Resources (2008), and Workshop "The Use of Learning Management Systems for TechMode Partners" in Hyderabad, India (2006)).
- She was *selected to give talks and teach workshops* at the UF College of Agriculture and Life Sciences (CALS) Teaching Enhancement Symposium (2009, 2008, and 2007).

Professional Activities and Professional Development

- Attended the Global Scientific Conference on Human Flourishing, Virtual, organized by the Templeton World Charity Foundation (Nov. 29-30, 2022)
- Attended the Virtual Global Conference on Sustainability in Higher Education, sponsored by the Association for the Advancement of Sustainability in Higher Education (Oct. 18, Oct. 26, and Nov. 3, 2022)
- Attended the UF-IFAS Artificial Intelligence Summit, Gainesville, FL (June 21, 2022)
- Attended seminar “The Inner Work of Racial Justice” by Rhonda V. Magee, at the UF Levin College of Law, Center for the Study of Race and Race Relations (March 16, 2022)
- Participated in the SEC Mini-Conference on AI in the Curriculum (April 8, 2022)
- Attended the HiPerGator Artificial Intelligence (AI) Symposium, UF (March 24, 2022)
- Professional development through participation in the UF/IFAS Extension Climate Mini-Workshop on “Understanding carbon systems, payment for ecosystem services programs and current initiatives” (Jan. 24, 2022)
- Attended the HiPerGator Artificial Intelligence (AI) Symposium, UF (Oct. 21, 2021)
- Attended the interactive training “Micro-resistance against microaggressions”, UF Center for Teaching Excellence (Sept. 22, 2021)
- Attended the UF webinar “The role of emotional intelligence in mentoring” by Meenalochani Kumar (Oct. 22, 2020)
- Attended the webinar training “Intersection of data and rights” (Artificial Intelligence, AI) search algorithms) by Dr. Safiya Noble and Dr. Dakita Moon. The event was part of the Infotech Speaker Series, UF (Oct. 21, 2020).
- Attended the Artificial Intelligence (AI) Retreat organized by the UF Informatics Institute and Provost Office, 6 hrs. (April 29, 2020).

- AI Program Discussion (UF-AI Initiative): Development of campus-wide AI Certificate for undergraduate students. Pros and cons; information about the new AI Initiative, 1 hr. (July 29, 2020).
- Attended the AI workshop "AI Research Computing Infrastructure at UF", 2 hrs. (Aug. 12, 2020).
- Attended IFAS Research Forum (2020):
    - IFAS Research Forum sessions June 17, 8:00 am to noon: Topics: Work/Life Balance; IFAS Efforts to Equity, Inclusion and Having Difficult Conversations about Diversity; Managing and Leading People; Mentoring Best Practices.
    - IFAS Research Forum sessions April 23, 9 am to noon: Faculty Forum COVID-19 and Teaching Related Tips and Recommendations to faculty members.
- Social justice, diversity and inclusivity, and anti-racism trainings:
    - Dr. Nicole Robinson (1 hr. Zoom). "Why do most diversity trainings fail", webinar by the Association of South-East Research Libraries.
    - Ana Puig (COE, UF), June 17, 2020, Zoom 1 hr.: "Mindfulness - Fighting systemic racism with compassion".
    - Prof. Paul Butler (Georgetown Law School), organized by the UF Levin College of Law (June 17, 2020; 1 hr. Zoom). "Can a broken system be fixed – race, policy, and BLM".
    - Dr. Rhonda Magee, Law Professor and Dr. Angel Acosta (June 18, 2020; 2 hr. Zoom). "Social justice, racism, and mindfulness" (Garrison Institute).
- NSF Broader Impacts Workshop, UF Gainesville, FL (May 27, 2020).
- Academics for Black Survival and Wellness, Online Training (June 19-26, 2020).
- Workshop "Inclusive Leadership – Cultivating a Thriving Team Culture", UF Training and Organizational Development, Office of HR Services (June 24, 2020).
- Attended Global Resilience Summit, Online (May 12-17, 2020).
- Attended the UF "Artificial Intelligence Retreat", Gainesville, FL (April 29, 2020).
- Attended the Workshop "Leading and Managing Remotely", part of the LEAD IFAS Network. Teacher: Dr. Matt Sowcik (March 25, 2020).
- Inspiring Women Leaders Conference, Gainesville, FL (March 8-10, 2020).
- Attended the UF Provost Symposium "Building Trust in Research", Gainesville, FL, Jan. 10, 2020.
- Professional development at the Mind & Life 2018 Summer Research Institute (SRI) – "Engaging cultural difference and human diversity", Garrison Institute, NY (June 2 - 8, 2018).
- Attended the UF Provost Symposium "The Role of the University and UF Faculty in Addressing the Rise of Extremism on Campus and the Nation", Gainesville, FL, Feb. 1-2, 2018.
- UF First Assessment Conference (Higher Education), Gainesville, FL (March 28, 2017).
- Attended the UF Provost Symposium "Implicit Bias: Understanding the Unconscious Roots of Thoughts and Feeling", Gainesville, FL, Jan. 26-27, 2017.
- Attended training workshop on mindfulness and conference "Contemplative Practices for the 21st Century University Conference", Blacksburg, Virginia (March 10-12, 2016).
- Attended Workshop "Climate Change: Creating a Trauma Sensitive Work Environment", UF Levin College of Law (Dec. 9, 2015).

- Attended Workshop "Teaching Naked" by Dr. J. Bowen, Gainesville, FL (Jan. 13, 2014).
- Completed the 1-year (12 graduate credits) Integral Studies Certificate Program, Fielding Graduate University, Santa Barbara, CA (7/2012 to 7/2013). This program provided me training in integral thinking and perspective taking that is profoundly important in inter- and transdisciplinary research.
- Sabbatical at the Faculty of Agriculture and Environment, University of Sydney, Sydney, Australia (1/2013 to 7/2013) (hosts: Dr. Alex B. McBratney and Dr. Budiman Minasny)
- Emotional Intelligence in the Workplace Course. Sydney University Continuing Education, Sydney, Australia (Feb. 27, 2013; one day course).
- The Psychology of Influence Course. Sydney University Continuing Education, Sydney, Australia (June 19, 2013; one day course).
- Attended kick-off workshop of NIFA AFRI-CAP project "*Integrating research, education and extension for enhancing southern pine climate change*", Atlanta, GA (May 2-3, 2011).
- Attended "*Feedstocks for Florida Biofuel*" Workshop organized by the Florida Bioenergy Association, Gainesville, FL (Sept. 17, 2010).
- Hosted and organized the *Southern Regional Cooperative Soil Survey Conference* – Innovative Technologies for the New Soil Survey, Gainesville, FL (July 14-17, 2008). (Organizing Chair: S. Grunwald; co-Chair: D. Peterson, Natural Resources Conservation Service, NRCS)
- Attended seminar *"Tips for Handling Difficult Employees"* by the American Management Association (AMA) (Aug. 1, 2007).
- Attended 3-day *Workshop "Building Better Work Relationships: New Techniques for Results-Oriented Communication"* by the American Management Association, Atlanta, GA (June 27-29, 2007) (3 Continuing Education Credits). Workshop topics: (i) Effective Work Relationships; (ii) Communication and Perceptions; (iii) Investigating Emotions and Emotional Intelligence; (iv) Building Better Relationships with Ourselves and Others; (v) Relationship Building; (vi) Expressing Needs within Work Relationships; (vii) Relational Communication; (viii) Relational Listening; and (ix) Relational Change and Conflict. This workshop helped to improve interpersonal communication skills.
- Attended *Workshop "Listening, Comprehending and Communicating"* (BCC020) offered by the Office of Human Recourse Services, UF. The workshop stimulated to reflect on communication patterns with colleagues and students and role play exercises facilitated to test behavior in typical work situations (June 8, 2006).
- Attended *IFAS Grant Writing Seminar* (Dec. 12, 2005).
- Hosted the *International Pedometrics 2005 "Frontiers in Pedometrics" Conference* in Naples, Florida:
    - Sept. 9 – 10, 2005: Pre-Conference Workshop "Quantitative Visible and Near-Infrared Diffuse Reflectance Spectroscopy for Soil Characterization"
    - Sept. 12 – 14, 2005: Pedometrics Conference (3 keynote talks + 39 oral + 26 poster presentations = 69 presentations)
    - Sept. 15, 2005: Post-Conference Workshop – Everglades, Florida.

Teaching Related Self-Improvement

- Attended the CALS Spring Teaching Retreat including the session on 'ChatGPT AI & teaching' Alumni Emerson Hall, Gainesville, FL (Feb. 22, 2023).
- Attended the Annual *UF CALS Teaching Enhancement Symposium*, Gainesville, FL (Aug. 2020, 2019, 2016, 2015, 2014, 2012, 2011, 2010, 2009, 2008, 2007, and 2005) to enhance

	teaching and instructional skills and learn about different teaching styles. – Training provided by the Mind & Life 2018 Summer Research Institute (SRI) – "Engaging cultural difference and human diversity", Garrison Institute, NY (June 2 - 8, 2018). – Attended the UF Provost Symposium "Implicit Bias: Understanding the Unconscious Roots of Thoughts and Feeling", Gainesville, FL (Jan. 26-27, 2017). – Invited to attend the UF Quest Conference, Gainesville, FL (Nov. 4, 2016). – Attended Workshop "Teaching Naked" by Dr. J. Bowen, Gainesville, FL (Jan. 13, 2014). – Attended Training in Sakai course management system, Gainesville, FL (July 21, 2010). – Attended the North American Colleges and Teachers of Agriculture Conference, State College, PA (June 23-25, 2010). – Attended *SWS Teaching Workshops* to learn about new e-tools to enhance teaching skills, Gainesville, FL (Aug 5., 2009, Aug. 7, 2008, and June 26, 2007). – Attended *conferences* to learn about innovations in teaching: – International Conference on Education and Information Systems: Technologies & Applications in Orlando, FL (July 14-17, 2005 – Conference on DE Teaching and Learning in Madison, WI (Aug. 4-6, 2004). – North American Colleges and Teachers of Agriculture Conference (NACTA) in Gainesville, FL (June 21-23, 2004). – Participated in *training* in a variety of courses offered by Center for Instructional & Technology Training (CITT) as part of the Instructional Computing Program for Faculty (2005 – present). – *Self-education* on new educational approaches, distance education, and e-tools (u.a., Stanford University Center for Teaching and Learning, Digital Library for Earth System Education (DLESE), Multimedia Educational Resource for Learning and Online Teaching (MERLOT)) [autodidactic approach]
Service as Peer-reviewer of Courses	– Member of peer-review committee of course FOR 3162/6164 Silviculture (Fall 2018 and Spring 2019) – Member of peer-review committee of course FOR 6934 Forest Ecosystem Resilience (Fall 2018) – Chair peer-review panel course SWS 4720C GIS in Soil and Water Science (Fall 2012) – Chair peer-review panel course SWS 6134 Soil Quality (Fall 2010) – Chair peer-review panel course SOS 5234 Environmental Soil, Water and Land Use (Fall semester 2008) – Review panel CALS minigrant proposals "Distance Technologies" (Fall 2007) – Peer-evaluation of course SOS 5602 Environmental Soil Physics (Fall 2006)
Technology Innovations Related to Teaching and Education	– Dr. Grunwald provided leadership to develop the **EcoLearnIT Reusable Learning Object (RLO) Educational System** (8/2006 – 12/2018) which is a globally accessible learning repository. RLOs are a type of online instruction that provide a digital educational resource that can be reused, scaled, and shared from a central online repository in the support of instruction and learning. It hosts RLOs focused on sustainable agriculture, life sciences and

environmental sciences and is used locally, nationally, and internationally. Grunwald is the Editor of EcoLearnIT, which publishes peer-reviewed RLOs. The RLOs were converted from the http://ecolearnit.ifas.ufl.edu platform into the UF Canvas eLearning system (2019 – present).

- Status 12/2018: EcoLearnIT hosted 203 published and peer-reviewed RLOs and had 787 registered users.

Activities as Distance Education Coordinator / Director of Distance Education Programs (Graduate and Certificate Programs, Soil and Water Sciences Department):

- Represented departmental distance education (DE) programs at the Statewide DE Coordination meeting, CALS/UF (6/10 and 12/2010).
- Major role in revisions of departmental Graduate Student Guide (approved by faculty 11/2010).
- Coordination of departmental eLearning project to support various improvements of course components including development of RLOs, online labs, recordings, etc.
- *Deployment of SWS virtual machines* (VMs) to DE and on-campus students, staff and faculty members in the SWS Department (with assistance from IFAS/IT) (8/2008). The virtual machines allow remote access to centralized workspace and various software packages (ArcGIS, statistical, geostatistical software, and MS Office Suite). Users can work on thesis /research projects and share data and results.
- *Adobe Presenter* software was introduced to instructors in the SWS Department (2007; multiple versions]. Adobe Presenter allows to add animations, voiceover Power Point slides, and integrate digital recordings into courses or RLOs.
- Worked with B. Hoover on refinement of the *SWS Distance Education Portal* (2006 – present), which provides customized tools to support departmental DE activities (e.g. access to seminar recordings; course management tools).
- The *Adobe Connect (former Breeze Live) synchronous, interactive communication system* was implemented in summer 2005 in the SWS Department (2005 – present; multiple versions). Adobe Connect improves the communication between instructors and DE students using a split-screen, multi-functional computer application delivered via the Internet that supports video, audio, text (chat), Power Point slides, and more.
- Collaborated with D. Jesseman (UF IFAS, Information Technology) to set-up a *virtual computer laboratory* for DE instruction. It has been used successfully in the DE and on-campus sections of SOS/SWS 5720C (2003 – 2010). The virtual computer lab concept has been adopted to teach computer-mediated courses in CALS via the CALS Computer Teaching Laboratory, UF.
- Collaborated with SWS staff to develop a cost-effective method to deliver on-campus *SWS seminars* to DE students (2005 – present).

Leadership to Co-Create Mindful Campus Culture at the University of Florida

University of Florida (UF) Mindfulness Program (5/2015 to present)

uf mindfulness

Dr. Grunwald, Director of UF Mindfulness, has provided leadership to form and grow an interdisciplinary, campus-wide UF Mindfulness Program (Core Members: Director and 3 Associate Directors; 15 faculty and staff members; about 1,200+ affiliated students, staff and faculty). Dr. Grunwald coordinates and leads the program.

UF Mindfulness is actively engaged in various interdisciplinary research activities linking mindfulness into STEM and AI education at UF.

The ***vision* of UF Mindfulness** is to co-create mindful UF campus culture and address mental health issues in the UF community. The UF Mindfulness team aims to (i) infuse mindfulness practices in existing courses and curricula at UF, (ii) offer new cross-disciplinary short courses, trainings, retreats and workshops, (iii) serve as a catalyst sparking mindful moments to create a healthy campus culture, (iv) raise awareness about the many benefits of mindfulness in higher education – including somatic, neurological, emotional, and cognitive benefits that improve learning outcomes, health, well-being and mindfulness is conducive to bring alive a felt sense of wholeness, happiness, zest for life and social service, and (v) amplify evidence-based mindfulness research.

Special recognition:

- The UF Mindfulness Team was awarded the 2016 UF Champions for Change Award (UF Office of Sustainability and the Healthy Gators Coalition).

The UF Mindfulness Program has a multi-tier organizational structure:

Core Programmatic Leadership and overall Coordinator: Director Dr. Sabine Grunwald

- Teaching and Practice Committee (Associate Director Dr. Kim Holton, UF College of Health and Human Performance)
- Research Committee (Associate Director Dr. Ana Puig, UF College of Education)
- Student Development Committee (Associate Director Jennifer Kennymore, MPH, CHES, CWHC, UF GatorWell)

A **digital media infrastructure** was developed consisting of a digital footprints: https://www.ufmindfulness.org/ or https://mindfulness.ufl.edu/, resources (360 Mindfulness public web site in Canvas eLearning), social media (Facebook: https://www.facebook.com/MindfulnessUF; Twitter: @sacred_swamp; YouTube channel), and email: mindfulness@ad.ufl.edu. The 'Breathing Space' blog is focused on facets of mindfulness, spirituality, neuroscience, body-mind-spirit, education, well-being and nurturing a meaningful life.

To co-create a "mindful campus community" several ***action events and interventions*** were coordinated/sponsored aiming to infuse and enrich the cultural campus fabric through mindfulness and contemplative practices.

Special Events UF Mindfulness Program: https://www.ufmindfulness.org/special-events

- Mindfulness Day 2019 "Mindfulness Day and Social Change" and workshop. J. Wayne Reitz Union UF, Gainesville, FL (April 1 and 2, 2019). Lead organizer and coordinator: S. Grunwald. Attendance of about 190 participants. Program incl. keynote speakers Dr. Marisela Gomez (social activist, M.D., Ph.D. and health professional, she is ordained in the order of interbeing in the Buddhist tradition of Thich Nhat Hanh; and Dr. Paul Fleischman (Vipassana teacher); 10 topical mindfulness sessions, a panel discussion, and workshop "Mindfulness and Social Change".
- Day of Peace 2019, Greater Gainesville International Festival – UN International Day of Peace. The UF Mindfulness incl. S. Grunwald provided a communal meditation.
- Day of Peace 2018, Greater Gainesville International Festival – UN International Day of Peace. S. Grunwald presented a peace poem and meditation.
- Mindfulness Day 2017 "Mind and Culture". J. Wayne Reitz Union UF, Gainesville, FL (Sept. 25, 2017). Lead organizer and coordinator: S. Grunwald. Attendance of about 300 participants. Program incl. keynote talk by Dr. Glenn Hartelius (Prof. in Transpersonal Psychology, CIIS); invited guest speaker/teachers: Gurudev Shri Amritji (Yogi Amrit Desai)

who is a pioneer of yoga in the West (Kripalu Yoga); workshop "Choosing love: Finding peace within the eye of the storm", and 13 special topical mindfulness sessions.

- Day of Peace 2017, Greater Gainesville International Festival – UN International Day of Peace. S. Grunwald and members of the UF Mindfulness attended the Day of Peace.
- UF Mindfulness Day 2016 "Integrating Mindfulness in Life". UF Library, Room 100, Gainesville, FL (Sept. 26, 2016). Lead organizer and coordinator: S. Grunwald. Attendance of about 320 participants. Program incl. keynote talks by Mickey Singer – internationally well-known spiritual teacher - and Dr. Lou Ritz, neuroscientists, and 8 mindfulness training sessions.
- "Victory over Violence" exhibition and campaign, UF Library West, Gainesville, FL (Sept. 26, 2016).
- Day of Peace 2016 "Peaceful Mind, Peaceful World", UN International Day of Peace, UF Plaza of Americas. Organizer: S. Grunwald and N. Lasseter. Meditation sit-in for peace, flag ceremony, and live music.
- Inaugural UF Mindfulness Day 2015. UF Library, Room 100, Gainesville, FL (Sept. 28, 2015). Kick-start of the UF Mindfulness project. Lead organizer and coordinator: S. Grunwald. Attendance of about 350 participants. Keynote speaker: Mickey Singer, and 9 topical mindfulness sessions.

Graduate Course Teaching by S. Grunwald

- SDS 6938 Mind-Body Practices and Spiritualities, Summer C 2022.

Mindfulness Talks, Presentations and Practice Sessions by S. Grunwald

https://www.ufmindfulness.org/talks-recordings

- Grunwald S. "Cosmic dance of life and doing laundry" (1 hr.), Art & Mindfulness Workshop Series, Harn Museum of Art (March 18, 2023).
- Grunwald S. "Seeing with clarity" (1 hr.), Art & Mindfulness Workshop Series, Harn Museum of Art (Sept. 23, 2022).
- Grunwald S. and K. Holton taught mindfulness meditation and yoga, Wellness & Creativity Workshop, Harn Museum of Art, Gainesville, FL (July 23-24, 2022).
- Grunwald S. "Uplift" (1 hr.), Art & Mindfulness Workshop Series, Harn Museum of Art (May 16, 2022).
- Grunwald S. "Work-Life Balance and Mindfulness" guest teaching session (1 hr.), SWS 6930 Professional Development in Soil, Water, and Ecosystem Sciences (Dec. 6, 2021).
- Grunwald S. "Mindfulness meditation session" (45 min.), National Association of Pediatric Nurse Practitioners Board Meeting (Oct. 1, 2021).
- Grunwald S. "Somatic meditation practice session". UF AT WORK-Faculty and Staff Wellbeing Week "Restore Balance" (Nov. 19, 2020).
- Grunwald S. "Mindful moments practice sessions and mindfulness talk". Southwest Regional Master Gardener Conference (virtual conference), organized by UF-IFAS Extension – Master Gardner Program, about 175 participants (Oct. 19 and 20, 2020).
- Grunwald S. "Mindfulness at UF to boost individual and institutional health" (1 hr. Zoom). Colloquium Presentation in the Department of Clinical and Health Psychology, College of Public Health and Health Professions (July 17, 2020).
- Grunwald S. "Guest lecture: Secular and non-secular mindfulness". Course REL 3938 (Course

instructor: Erin Prophet), UF campus (Oct. 25, 2019).

- Grunwald S. “Mindfulness practice session” (1 hr.) Professional development to students and staff, UF College of Liberal Arts and Sciences, Gainesville, FL (May 7, 2019).
- Grunwald S. “Inner empowerment and outer transformation: Interpersonal mindfulness and alternative forms of activism”. UF Mindfulness Day 2019, UF Gainesville, FL (April 1, 2019).
- Grunwald S. “Guest lecture: Secular and non-secular mindfulness”. Course REL 3938 (course instructor: Erin Prophet), UF campus (March 15, 2019).
- Grunwald S. “Mindfulness practice session”. Taught to students in UF Residence Halls complex (North Hall, Weaver Hall, and more) for Pre-Health LLC. UF, Gainesville, FL (Feb. 20, 2019).
- Grunwald S. “Mindfulness practice session” (1 hr.). Taught to residents, Department of Surgery, UF College of Medicine (coordinator: Dr. David Hall), Gainesville, FL (Dec. 7, 2018).
- Grunwald S. “Exploration of somatic and cognitive meditation practices within the body-soteriological pathways model”. Mind & Life Institute. International Symposium for Contemplative Research (ISCR), Phoenix, AZ (Nov. 8-11, 2018).
- Grunwald S. “Reconciliation of Buddhist notions and Western psychology in support of a whole person psychology”. Mind & Life Institute. International Symposium for Contemplative Research (ISCR), Phoenix, AZ (Nov. 8-11, 2018).
- Grunwald S. and Lewis C. “Mindfulness training sessions” (75 min.). Training for first year medical students (CLG-1), UF Medical School, Organizer of CLG-1: I.M. Estores, UF Health Integrative Medicine Program. George T. Harrell M.D. Medical Education Bldg., Gainesville, FL (Oct. 3, 2018).
- Grunwald S. “Practices of mindfulness teaching”. Expanded Food & Nutrition Education Program, UF IFAS Extension, Gainesville, FL (June 13-14, 2018).
- Grunwald S., Lewis C. and Lenes E. “Mindfulness training sessions” (75 min.). Training for third year medical students (CLG-3), UF Medical School, Organizer of CLG-3: I.M. Estores, UF Health Integrative Medicine Program. George T. Harrell M.D. Medical Education Bldg., Gainesville, FL (May 1-2, 2018).
- Grunwald S. “Mindfulness introduction and practice session”. APhA-ASP Mental Health Awareness, UF College of Pharmacy, UF Gainesville, FL (March 13, 2018).
- Grunwald S. “Facilitators of mindfulness meditation / contemplation & joint lunch to unplug, find silence in the storm of a busy campus, distress, and reenergize”. J. Wayne Reitz Union, Reflection/Meditation room 3325, UF campus (Sept. 1, Oct. 13, Nov. 3, and Dec. 1, 2017).
- Grunwald S. “Mindfulness meditation session”. Wellness Administrative Retreat organized by Sheila Diuguid (UF HR) for faculty with administrative roles and Shands ACU Clinic Managers, Cypress Lodge, Lake Wauberg, Micanopy, FL (Oct. 5, 2017).
- Grunwald S. “Mindfulness training session” (2 hrs.). Training for first year medical students (CLG-1), UF Medical School, Organizer of CLG-1: I.M. Estores, UF Health Integrative Medicine Program. George T. Harrell M.D. Medical Education Bldg., Gainesville, FL (Oct. 4, 2017).
- Grunwald S. “Cultural digital paranoia and mania – How can we find silence in a world of noise”. UF Mindfulness Day, UF Gainesville, FL (Sept. 25, 2017).
- Grunwald S. “Mindfulness and staying in the green zone”. UF Health Wellness Wednesday Seminars, UF Gainesville, FL (Aug. 2, 2017).

- Grunwald S. “Mindfulness meditation practice session”. UF School of Natural Resources and Environment De-Stress Fest, Reitz Union, Gainesville, FL (April 11, 2017).
- Grunwald S. and A. Puig “Mindfulness, stress and anxiety reduction - practice session”. UF Graduate Student Appreciation Week Wellness Day 2017, Reitz Union, Gainesville, FL (April 4, 2017).
- Grunwald S. “Mindfulness guest lectures and practice session”. IDH 2930 Honors course Professional Development, (course teacher: Al Wysocki) (March 13 and 27, 2017).
- Grunwald S. “OneScience: Authentic and mindful scientific integration approaches”. UF OneHealth Seminar, UF Emergent Pathogen Institute (March 13, 2017).
- Grunwald S. “Mindfulness guest lecture and practice session”. Graduate course “Nonprofit Leadership” (course instructor: Jennifer A. Jones), Gainesville, FL (Feb. 27, 2017).
- Grunwald S. “UF Mindfulness Program presentation”. UF Faculty Senate Meeting, Gainesville, FL (Feb. 16, 2017).
- Grunwald S. “UF Mindfulness Program presentation”. UF Faculty Senate Steering Committee Meeting, Gainesville, FL (Feb. 2, 2017).
- Grunwald S. “Mindfulness training practice session” (1 hr.). UF College of Veterinary Medicine Student Chapter of the American Veterinary Medical Association (SCAVMA) (Jan. 30, 2017).
- Grunwald S. “Mindfulness training practice session” (4 hrs.). Professional training for staff of the UF hotel J. Wayne Reitz Union, Gainesville, FL (Nov. 21, 2016).
- Grunwald S. “Mindfulness practice session” at the Dean’s retreat, UF College of the Arts, Gainesville, FL (June 28, 2016).
- Grunwald S., M. Ardelt, A. Puig, N.J. Lasseter, L.A. Ritz, F. Lewis, A. Brown, K. Holton, J. Snyder, N.F. Dolen, T. Drake, T. Tannen, M. Murphy, E. Turner and A.S. Lindner“. Embracing mindfulness – breath-by-breath – at the University of Florida”. Contemplative Practices for the 21st Century University Conference**,** Blacksburg, Virginia (March 10-12, 2016).
- Grunwald S. “The power of mindfulness in creating space to address the challenges in a complexifying world”. Invited seminar in the leadership seminar series. CALS UF, Gainesville, FL (Feb. 26, 2016).
- Grunwald S. “The UF Mindfulness program”. CALS Solutions Seminar, Straughn Center, UF, Gainesville FL (Jan. 28, 2016).

Workshops UF Mindfulness Program: https://www.ufmindfulness.org/workshops

- 360° Mindfulness Workshop: Variety of mind-body practices taught by members of the UF Mindfulness team and invited guest teachers (1 hr. practice session once a week in spring and fall semesters)

Workshops and Practice Sessions taught by S. Grunwald:

- 360° Mindfulness Workshop, Spring semester 2023 (14 sessions)
    - S. Grunwald “AI, spirituality, humanity, wisdom and mindfulness practice” (Jan. 23, 2023)
    - S. Grunwald “Deep dive meditation” (Feb. 27, 2023)
- 360° Mindfulness Workshop, Fall semester 2022 (14 sessions; 171 registrants).
    - S. Grunwald “Secular and non-secular mindfulness” (Sept. 12, 2022)
    - S. Grunwald “The ecology of meditation practices” (Oct. 24, 2022)

- 360° Mindfulness Workshop, Spring semester 2022 (14 sessions; 216 registrants).
    - S. Grunwald “Introduction to 360° Mindfulness” (Jan. 10, 2022)
    - S. Grunwald “Radical belonging (April 4, 2022)
- 360° Mindfulness Workshop, Fall semester 2021 (14 sessions).
    - S. Grunwald “Nurturing the positive” (Sept. 13, 2021)
- Workshop “Connect to your precious spiritual & human journey: Experience transformative meditation practices and life coaching tools for intentional action” (2 ½ hrs.). Online in Zoom. Teachers: S. Grunwald and L. Clemans (Aug. 7, 2021).
- 360° Mindfulness Workshop, Spring semester 2021 (14 sessions)
    - S. Grunwald “social meditation” (March 29, 2021).
    - S. Grunwald was panel member of “Q&A on meditation” (April 19, 2021)
    - S. Grunwald “social meditation” (April 26, 2021)
- Zen Workshop organized collaboratively by Florida Sanbo Zen and UF Mindfulness (Zoom). Teacher: Valerie Forstman Roshi. Introduction: S. Grunwald (Jan. 31, 2021).
- 360° Mindfulness Workshop, Fall semester 2020 (14 sessions).
    - S. Grunwald “Compassion meditation practice” (Sept. 28, 2020)
    - S. Grunwald “Resilience” (Oct. 5, 2020)
- 360° Mindfulness Workshop, Summer semester 2020 (14 sessions).
    - S. Grunwald “Compassion and resilience fatigue” (June 1, 2020)
- 360° Mindfulness Workshop, Spring semester 2020 (15 sessions).
    - S. Grunwald “Seeing with clarity” (Jan. 9, 2020)
    - S. Grunwald “Social breath” (Jan. 16, 2020)
    - S. Grunwald “Self-compassion” (Jan. 23, 2020)
    - S. Grunwald “Compassion practice” (Jan. 30, 2020)
    - S. Grunwald “Compassion for the world” (Feb. 13, 2020)
- “Mind Zoom” Workshop Sessions, Spring semester 2020 (7 sessions).
    - S. Grunwald “The nuts-and-bolts of meditation practice” (Feb. 25, 2020)
    - S. Grunwald “Multiple ways to practice mindfulness” (March 4, 2020)
    - S. Grunwald “Corona Mind Zoom 1: How to mindfulness related to the Corona virus public health crisis” (March 18, 2020)
    - S. Grunwald “Corona Mind Zoom 2” (March 25, 2020)
    - S. Grunwald “Corona Mind Zoom 3” (April 1, 2020)
    - S. Grunwald “Corona Mind Zoom 4: Compassion practice” (April 8, 2020)
    - S. Grunwald “Corona Mind Zoom 5: Let go of stress and anxiety” (April 22, 2020)
- 360° Mindfulness Workshop, Fall semester 2019 (14 sessions).
    - S. Grunwald “Introduction to mindfulness” (Aug. 29, 2019)
    - S. Grunwald “Mindfulness meditation practice” (Sept. 5, 2019)
    - S. Grunwald “Mindfulness meditation practice” (Sept. 12, 2019)
    - S. Grunwald “Compassion and loving kindness practice” (Sept. 19)
    - S. Grunwald “Compassion and loving kindness practice” (Oct. 10)
    - S. Grunwald “Mind-body practice” (Oct. 28)

    - S. Grunwald and H. Pankhurst “Gratitude practice” (Nov. 25)
- 360° Mindfulness Workshop, Spring semester 2019 (14 sessions).
    - S. Grunwald “Mindfulness meditation” (Jan. 28)
    - S. Grunwald “Mindfulness and heartfulness” (Feb. 4)
    - S. Grunwald “Less stress & more happiness” (Feb. 11)
    - S. Grunwald “Open mindfulness meditation practice” (Feb. 25)
    - S. Grunwald “Open mindfulness meditation practice” (March 25)
    - S. Grunwald “Open mindfulness meditation practice” (April 15)
    - S. Grunwald “Open mindfulness meditation practice” (April 22)
- 360° Mindfulness Workshop, Fall semester 2018 (19 sessions).
    - S. Grunwald “Introduction to mindfulness” (Aug. 23)
    - S. Grunwald “Letting go, letting be, letting come #1 (Sept. 20)
    - S. Grunwald “Letting go, letting be, letting come #2 (Oct. 12)
    - S. Grunwald “Mind and body #1” (Oct. 26)
    - S. Grunwald “Mind and body #2” (Oct. 29)
    - S. Grunwald and K. Mizuta “Gratitude and mindfulness” (Nov. 15)
    - S. Grunwald “Learn about formal meditation sitting practice” (Nov. 19)
- Somatic Meditation Workshop (2 hrs.). Teacher: S. Grunwald. Health Integrative Medicine Conference “Flow: Mind, Movement, Energy & Integrative Pain Management”, Medical School, UF (April 20, 2018).
- UF Mindfulness weekly meditation practice sessions, Spring semester 2018 (14 sessions)
- Workshop “Life Work Balance” (2 hrs.). Teacher: S. Grunwald, Women in Science Group, American Society of Agronomy-Crop Science Society of America-Soil Science Society of America International Conference, Tampa, FL (Oct. 22-25, 2017).
- Workshop “Strategies for managing stress and mindfulness” (2 hrs.). Teachers: H. Radunovich and S. Grunwald. UF-IFAS Extension Symposium “A Time to Learn and Discover New Opportunities”, Gainesville, FL (April 19, 2017).
- Vision Quest UF Mindfulness (4 hrs.). Facilitator: S. Grunwald (Feb. 24, 2017).
- 4H Workshop “Change Your Brain, Change Your Life” (2 hrs.). Teachers: S. Grunwald (mindfulness practice) and K. Holton (Yoga). J. Wayne Reitz Union, UF (July 27, 2016).

Courses & Trainings: https://www.ufmindfulness.org/courses-trainings
Courses & Trainings by S. Grunwald:

- Training in Mindfulness for student UF AWARE Ambassadors (1 hr.). Teacher: S. Grunwald. Online in Zoom (Dec. 2, 2020).
- 6-week “Mindful Communication” Training (1 hr. per week). Professional training provided to staff of the UF Library. Teacher: S. Grunwald (July 11 to Aug. 15, 2019).
- Training in Mindfulness (2 hrs.), Expanded Food & Nutrition Education Program (EFNEP), UF-IFAS Extension. Teacher: S. Grunwald (June 13, 2018).
- Unlocking Creativity through Mindfulness (2 hrs.), UF-CALS Teaching Enhancement Symposium, Gainesville, UF. Teachers: M. Ardelt, S. Grunwald, N. Lasseter, and L. Ritz (Aug. 18, 2015).
- Mindfulness Wave (2 hrs. sessions taught in 16 UF colleges) by S. Grunwald and other UF Mindfulness team members (2015 to 2016).

Retreats UF Mindfulness: https://www.ufmindfulness.org/retreats

Guided Meditations UF Mindfulness: https://www.ufmindfulness.org/guided-meditations

Meditation Community Practices facilitated by S. Grunwald:

- Mindfulness meditation and networking lunches (~bi-weekly in Fall 2015; Spring and Fall 2016; Spring 2017 semesters).
- Healing and kindness meditation, 1 hr. online (Nov. 10, 2016).
- UF Meditation Chain: Continuous chain of meditators meditating for one day, J. Wayne Reitz Union Rm 3325, Gainesville, FL (July 29, 2016).
- Meditations on the lawn of the Plaza of Americas jointly facilitated by the UF Mindfulness team and the Meditation Student (MOR) club (bi-weekly in Spring 2016 semester).
- Meditation Chain: Continuous chain of several meditators meditating for two days, J. Wayne Reitz Union Rm 3325, Gainesville, FL (April 21 and 22, 2016).
- Launch of UF Mindfulness with a Meditation Mob, Plaza of Americas, UF campus, Gainesville, FL (Sept. 24, 2015).

Publications:

- Grunwald S. 2023. Ecosattvas and ecodharma – Modern Buddhist perspectives of soil and the environment. In N. Patzel, E. C. Brevik, S. Grunwald, & C. Feller (Eds.), Cultural understanding of soils. Springer, New York, NY (in press).
- Grunwald S. 2021. Embodied liberation in participatory theory and Buddhist Modernism Vajrayāna. J. of Dharma Studies. doi:10.1007/s42240-021-00092-4.
- Grunwald, S., & LaMontagne, L. 2020. The state of mindfulness at top U.S. public universities: A brief review and lessons learned, pp. 331-353, chapter 19. In S. K. Dhiman (Ed.), The Routledge companion to mindfulness at work. Routledge ISBN 9780367200046.
- Ardelt M. and S. Grunwald. 2018. The importance of self-reflection and awareness for human development in hard times. Research in Human Development J. 15(3-4): 187-199. doi:10.1080/15427609.2018.1489098.
- Grunwald S., M. Ardelt, A. Puig, N.J. Lasseter, L.A. Ritz, F. Lewis, A. Brown, K. Holton, J. Snyder, N.F. Dolen, T. Drake, T. Tannen, M. Murphy, E. Turner and A.S. Lindner. 2016. Proceeding paper: Embracing mindfulness – breath-by-breath – at the University of Florida. Contemplative Practices for the 21st Century University Conference, March 10-12, 2016, Blacksburg, Virginia.

Committees and Professional Memberships

International Committees:

- Member of the International Fresh Produce Association (1/2023 – present)
- Affiliation with the Research Center of the International Fresh Produce Association (IFPA) (6/2022 – present)
- Member of the Diversity, Equity, and Inclusivity Committee, International Union of Soil Science (IUSS) (12/2022 – present)
- Member of the American Association for the Advancement of Science (AAAS) (2021 – present)
- Member of the Soil Spectroscopy for the Global Good Coordinated Innovation Network (Soil Spec4gg) led by the Woodwell Climate Institute (10/2020 – present)

- Member of the Working Group “Cultural Patterns of Soil Understanding”, International Union of Soil Science (IUSS) (2016 – present)
- Member of the Pedometrics Awards committee, Commission 1.5 Pedometrics, International Union of Soil Science (IUSS) (2014 – present)
- Member of the “Global Soil Partnership (GSP) for Food Security and Climate Change Mitigation and Adaptation” (spearheaded by FAO; partners: European Commission, international agencies with global soil mandate, regional and national soil science associations and networks, and national soil science associations and universities) (6/2011 – present)
- Member of the IUSS Division History, Philosophy and Sociology of Soil Science (2012 – present)
- Member of the North American Global Soil Map Node Working Group (5/2009 – present) which is part of the Global Soil Map.net Initiative
- Member of the International Pedometrics Advisory Group (8/2011 – present)
- Member of the Global Research Alliance on Agricultural Greenhouse Gases (2010 – 2018)
- Member of the International Agricultural Learning Repositories Task Force (AgLR-TF), which provides guidance, standards, technologies, tools and recommendations for development of digital repositories of e-learning materials (2008 – 2014)
- Member of the Global Spectral Working Group – IUSS Commission Pedometrics (2008 – present)
- Advisory Committee, Commission 1.5 Pedometrics of Div. 1 of IUSS (2006 – present)
- Member of the Global Working Group Digital Soil Mapping – IUSS Commission Pedometrics (2004 – present)
- Member of Open Agricultural Curriculum and Learning Initiative (AgroCuri) (2008 – 2011)
- Vice Chair, Commission 1.5 Pedometrics of Division 1 of the IUSS (2004 – 2006)
- Secretary, International Working Group on Pedometrics – Provisional Commission of IUSS (2002 – 2004)

National Committees:

- Member of the Working Group ‘Soil Science Society of America and the Soil Science Society of China’ (SSSA-SSSC) to organize joint U.S.-China soil science webinars (6/2022 – present)
- Chair of the Specialty Group “Mindfulness – A Way of Living”, ASA-CSSA-SSSA Society (9/2017 – present)
- Chair of the American Society of Agronomy (ASA) Community “Global Digital Soil Map” (1/2011 – 11/2013)
- Ambassador of the ASA – Crop Science Society of America (CSSA) – Soil Science Society of America (SSSA) / University of Florida representative (9/2011 – 9/2013)
- Chair of the Digital Soil Mapping Working Group, Div. S-5 Pedology, SSSA (11/2008 – 12/2012)
- Member of the ASA Community “Greenhouse Gas Emissions and Carbon Sequestration” (10/2011 – present)
- Member of the Interdisciplinary Workgroup “Soil Change”, Soil Science Society of America, ASA-CSSA-SSSA (10/2010 – present)
- Member of U.S. Global Soil Map Node Working Group (5/2009 – present)

- Co-Chair of the New Technology Committee – Southern Soil Survey Cooperators / Natural Resources Conservation Service (NRCS) (2008 – 2018)
- Member of the National New Technology Committee – NRCS (2007 – 2018)
- Vice-Chair of the Steering Committee – Southern Cooperative Soil Survey Conference (National Cooperative Soil Survey Program – NRCS) (2007 – 2008)
- Member of the NRCS Committee for New Technology (2005 – 2015)
- Member of the SSSA Ad-hoc Committee on Professional Development and Mentoring (2004 – 2005)

University Committees:

- Member of the search committee, UF-IFAS Everglades Research and Education Center, Assistant Professor Water Management position (8/2022 – present)
- Affiliate member of One Health Center, UF (1/2017 – present)
- Member of the Center for Spirituality and Health, UF (5/2016 – present)
- Member of the Interdisciplinary Informatics Institute, UF (7/2014 – present)
- Member of the UF Core Task Force – Exploration of Meaning and Purpose in Education. Task Force Group 1 and Combined Workgroup 1 Humanities (5/2016 – 5/2019)
- Member of the Task Force on International Engagement – International Engagement in the Tenure, Permanent Status, and Promotion (T-PS-P) (2012-2013)
- Member of the Academic Freedom, Tenure, Professional Relations & Standards Committee (2012 – 2015)
- Member of the International Programs Advisory Team (IPAT) (2009 – 2012)
- Florida Agricultural Experiment Station Representative to the Florida Cooperative Soil Survey Program of the USDA – NRCS (2001 – 2016)
- Member of the College of Agriculture and Life Science (CALS) Carbon Working Group (10/2008 – 10/2010)
- Member of the UF Distance Learning Council (2006 – 2010)
- Chair of the CALS Distance Education Advisory Committee (2007 – 2009)
- Chair of the CALS Teaching Technology Committee (2005 – 2006)
- Member of the UF Online Collaborative Software Committee (2005 – 2006)
- Member of the IFAS International Distance Education Committee (2005 – 2006)
- Member of the CALS Teaching Technology Committee (2003 – 2005)
- Member of the UF Interdisciplinary Water Working Group (2006 – 2008)
- Member of the UF Water Institute (2003 – present)
- Representative of the Soil and Water Science Department – UF Interdisciplinary Concentration in Geographic Information Systems (2001 – present)

Department Committees (Soil, Water and Ecosystem Sciences, SWES):

- Representative of the SWES Department – UF Artificial Intelligence (AI) Task Force (2020 – present)
- Member of the ad-hoc Bylaw Committee – Shared Governance (2020 – present)
- Chair of the Mentoring Committee of Assistant Professor Allan Bacon (2017 – present)
- Member of the Distance Education Committee, SWSD (2003 – present)

- Member of the Academic Programs Committee, SWSD (2017 – 2020)
- Member of the Search Committee for new faculty position in Environmental Pedology (2011 – 2012; and 2015)
- Chair of the Search Committee for new faculty position in Landscape Biogeochemistry / Multi-scale Biogeochemical Modeling (Soil and Water Sciences Department) (2009 – 2010)
- Chair of the Teaching Committee, Soil and Water Sciences Department (2009 – 2011)
- Chair of the Distance Education, Certificate and Short Courses Committee (2009 – 2011)
- Chair of the ad-hoc Committee Research Map (pedology/soil landscape analysis) (2008)
- Ad-hoc Committee Faculty Salary Incentive Program (2008)
- Mentoring Committee Tenure-track Faculty Gurpal Toor (2007 – 2010)
- Chair of the Certificate Programs Committee (2006 – 2008)
- Chair of the Short Courses Committee (2007 – 2008)
- Chair of the Distance Education Committee (2002 – 2008)
- Member of Research Committee, Soil and Water Science Department (2009 – 2012)
- Member of the Graduate Award Committee (M.S. and Ph.D. category) (2005 – 2007)
- Chair of the Search Committee – Academic Supp. SVCS, CRD position (SWS DE Assistant) (4/2005)
- Member of the Search Committee for new faculty position Biogeochemistry in Wetlands (6/2004)
- Member of the Search Committee – faculty position in Water Resources and Ecological Modeling, UF (7/2004)
- Member of the Short Courses Committee (2005 – 2007)
- Member of the Publicity and Web Site Committee (2005 – 2009)
- Chair of the Virtual Computer Laboratory Committee (2003 – 2006)
- Member of the Research Forum Committee (2003 – 2010)
- Member of the Distance Education Committee (2001 – 2002)
- Member of the Computer Committee (2001 – 2007)
- Member of the Core Research Committee (2001 – 2007)

Special Activities:

- President, Gamma Sigma Delta Honors Society (2009 – 2010)
- Vice President and Secretary, Gamma Sigma Delta Honors Society (2008 – 2009)

Reviewer

Served as reviewer of the following journals:
Biogeoscience, Ecological Modeling, Ecological Indicators, Ecology & Society, Environmental Modeling & Software, Environmental Management, Frontiers Environmental Science, Frontiers Soil Science, Geoderma, Geoderma Regional, Landscape Ecology, PLOS One, Remote Sensing J., Sensors J., Soil Science Society of America J., Soil and Tillage, STOTEN, Vadose Zone J., and various other journals (ad-hoc reviews).

Special reviews:
Special reviews – international:

- Evaluated book proposal and draft chapter outline with 26 abstracts of the book "Pedometrics Innovations – Insights from the II Pedometrics Brazil Conference", Springer Publisher (July 2022).
- Co-organized with N. Patzel symposium session "Culture and Soils", World Congress of Soil Science, Glasgow, Scotland (Aug. 2022)
- Review of proposal "Terrain Artificial Intelligence (AI)", Strategic Partnership Programme, National Science Foundation Ireland (Aug. 2020)
- Ad-hoc reviewer of research proposal "Pedometric modeling at national scale to evaluate drought risk on soils under agricultural use in Germany" Ref. No. LI2360/2-1, German Research Foundation (Deutsche Forschungsgemeinschaft) (Feb. 2020).
- Ad-hoc reviewer of research proposal "STEREO III – PROSOIL" by the Belgian Remote Sensing Research Programme (May 2015)
- Ad-hoc reviewer of proposal "From areal to multicriterial compensation: How to integrate soil ecosystem in compensation mechanisms applied in land-use planning?" Swiss National Science Foundation (June 2014)
- Evaluated the promotion package of Dr. Budiman Minasny to Associate Professor in Soil Science, Faculty of Agriculture and Environment, University of Sydney, Australia (May, 2013)
- Member of the peer-review team and scientific advisory panel of the Digital Soil Mapping Minnesota Arrowhead project conducted by Natural Resources Conservation Service (NRCS) (2012-2014). This pilot will develop standards for future pixel-based soil maps in the U.S. under the auspices of NRCS – U.S. Dept of Agriculture.
- Review of proceeding papers submitted to the Global Digital Soil Mapping Workshop, Sydney, Australia (April 10-14, 2012)
- Evaluated the promotion package of Dr. Budiman Minasny to Associate Professor, University of Sydney, Australia (May, 2011)
- Ad-hoc review of proposal submitted to Research Programme for Earth Observation "Stereo II", Belgium Federal Public Planning Service (Jan. 23, 2010)
- Served on Scientific Committee Int. Global Workshop on Digital Soil Mapping, Rome, Italy (May 24-26, 2010)
- Served on Scientific Committee Int. Pedometrics Conference, Beijing, China (Aug. 26-28, 2009)
- Served on Scientific Planning Committee and reviewed abstracts submitted to 3rd Global Workshop on Digital Soil Mapping, Logan, UT (Sept. 30 – Oct. 3, 2008)
- Reviewed proposal for textbook "Pedometrics – An Introductory Synthesis" by Alex. B. McBratney et al., Elsevier Publisher (8/2006)
- Reviewed 60 abstracts submitted to the Int. Workshop on Digital Soil Mapping, Montpellier, France (Sept.15-17, 2004)
- Evaluated the promotion package of Dr. Murray Lark, Silsoe Research Institute, United Kingdom (11/2003)

Special reviews – national:

- Evaluated the tenure and promotion package (promotion to Associate Professor) of Dr. Nic Jelinski, Department of Soil, Water, and Climate, University of Minnesota (Sept. 2020)
- Evaluated the tenure and promotions package (promotion to Associate Professor) of Dr. Bradley Miller, Department of Agronomy, Iowa State University (Sept. 2020)

- Evaluated the promotion package of Dr. Nicholas Balster to Full Professor, UW-Madison (Dec. 2019)
- Reviewed promotion package of Dr. Patrick Drohan for Full Professor (Penn State University) (Oct. 2018)
- Evaluated the promotion package of Dr. Alfred Hartemink to Full Professor, Soil Science Department, UW-Madison, Madison, WI (May 2013)
- Served as ad-hoc reviewer NSF Plant Genome Research Program "Landscape Genomics of Adaptation and Risk Assessment to Climate Change in the California Forest Ecosystem" (5/2012)
- Served as ad-hoc reviewer NSF Geography and Spatial Sciences Panel (10/2011)
- Reviewed the tenure and promotion package (Associate Professor) of Dr. Alfred Hartemink, Soil Science Department, University of Wisconsin-Madison (7/2011)
- Ad-hoc review of NSF program BCS – Geography and Spatial Sciences; proposal 'Extension of Markov Chain Geostatistics for Spatiotemporal Modeling of Landscape Heterogeneity' (April 10, 2011)
- Evaluated the tenure & promotion package of Dr. Craig Rasmussen, Department of Soil, Water and Environment, University of Arizona, Tucson, AZ (8/2010)
- Evaluated the Tenure & Promotion package of Dr. David J. Brown, Department of Crop and Soil Sciences, Washington State University, Pullman, WA (7/2009)
- Served as ad-hoc reviewer USDA National Research Initiative (NRI) Panel (May 15, 2008)
- Served as ad-hoc reviewer NSF Ecosystem Studies Panel (Spring 2008)
- Served on NSF Long-term Research in Environmental Biology (LTREB) Panel (10/2007)
- Served as reviewer TSTAR-Caribbean Grant Program (2006)
- Served as reviewer USDA-CSREES Small Business Innovation Research Program (2006)
- Served two times on the review panel Environmental Protection Agency (EPA) program "Development of Watershed Classification Systems for Diagnosis of Biological Impairment in Watersheds and their Receiving Water Bodies" (4/2002 and 4/2003)
- Served on the "Documentation Standards Review Team (DSRT) to revise the National Soil Survey Handbook Field Description Standards" (NRCS-USDA) (2003)

<u>Special reviews – University of Florida</u>:

- Review of UF student award applications for various departmental and college awards (Nov. 2018 and 2019)
- Reviewed applicant packages for the UF Graduate School Dissertation Award (April 2018)
- Review of award application packets for the UFRP Award (IFAS) (Feb. 2018)
- Reviewed Dr. Samira Daroub engaged in a leadership program. The review entailed a detailed 360-degree feedback and I assessed her technical, behavioral and personal skills (April 2017)
- Evaluated the promotion package of Ms. Susan Curry to Senior Lecturer, Soil and Water Science Department, University of Florida, FL (Aug. 2014)
- Review of award nomination packages (Distinguished, Senior, International, and Junior Faculty Awards) Gamma Sigma Delta honor society (2012)
- Review of CRIS project report "Mechanisms of subsurface carbon accumulation in southern coastal plain soils" by W.G. Harris (Dec. 19, 2008)

- Chair peer-review panel teaching course SOS 5234 Environmental Soil, Water and Land Use (Fall semester 2008)
- Review panel CALS minigrant proposals "Distance Technologies" (Fall 2007)
- Peer-evaluation of course SOS 5602 Environmental Soil Physics (2006)
- Evaluated Dr. Nicholas Comerford – Academic Leadership Competency Inventory (June 6, 2005)
- Evaluated Dr. Mary Collins leadership abilities (survey was part of the UF IFAS Leadership Program) (Oct. 7, 2002)

International Professional Engagement

International Activities:

- Served on the scientific planning committee of the Digital Soil Mapping and Global Soil Map, Goa, India (Dec. 14-18, 2020; postponed due to COVID-19 pandemic). Organized by the International Union of Soil Sciences, Working Group Digital Soil Mapping.
- Served on the scientific planning committee of the Pedometrics Conference, Guelph, Ontario, Canada (June 2-6, 2019). Organized by the International Union of Soil Sciences, Commission Pedometrics.
- Convener of the Divisional Symposium "C4.5.1. Integration of historical, philosophical and sociological worldviews to secure and sustain soils in the future", International Union of Soil Science (IUSS), World Congress of Soil Science, Rio de Janeiro, Brazil (Aug. 12-17, 2018).
- Invited seminar "Soil carbon assessment from field to continental scales", Environmental Science Department, Nanjing University, Nanjing, China (Nov. 10, 2014).
- Research visit and invited seminar, International Potato Center (Centro International De La Papa, CIP), Lima, Peru, July 2-10, 2014. The visit also included field visits to the Mantaro Valley watershed (Jauja, Conception, and Huancayo regions) in the Central and Southern Andes of Peru.
- Attended AgMIP workshop "Harmonizing Agricultural Data and Models: AgMIP-USDA Workshop, Gainesville, FL, Jan. 10, 2014.
- *Sabbatical* at the Faculty of Agriculture and Environment, University of Sydney, Australia (1/2013 to 7/2013) (hosts: Dr. Alex B. McBratney and Dr. Budiman Minasny).
- International research project funded by the National Science Foundation (NSF) "Development of a geospatial soil-crop inference engine for smallholder farmers in India" (2012-2014). Project goals: Infuse spectral and geospatial technologies into smallholder farm communities to improve food security and sustainability. Several trips to southern India to collect soil-environmental data and visit with Indian collaborators.
- Joint presentation "Responding to the Global Soil Crisis" (A.B. McBratney, N. McKenzie, R. Lal, N. I. Krishna, J. Hempel, S. Grunwald, and C.L. Morgan) at the United Nations, New York (April, 2012) in preparation for the *Rio+20 Meeting*. The meeting was facilitated by the United States Studies Centre at the University of Sydney
- Attended IFAS/UF International Workshop "UF International Engagement in Haiti and Beyond", Gainesville, FL, March 21, 2012
- Grunwald was PI of the research project "*Modeling of Soil Carbon Dynamics in the Andes, Peru*" funded by the Consultative Group on International Agricultural Research (CGIAR) Research Program on Water, Land and Ecosystems" (2012-2016). Research trips to Lima Peru and the highlands of the Andes.

- Invited to attend the International Workshop "*Design of Global Environmental Gradient Experiments Using Critical Zone Observatories*" (NSF-funded), Newark, Delaware, Nov. 8-10, 2011
- Attended Global Workshop "*Agricultural Model Intercomparison and Improvement Project" (AgMIP)*, San Antonio, TX, Oct. 13-15, 2011
- Invited to attend the *Global Soil Security* meeting, Washington D.C., Sept. 14-16, 2011 organized by the United States Study Center, Sydney, Australia to foster collaboration between U.S. and Australia
- Attended the *GlobalSoilMap.net* meeting: Global consortia of academics and agencies to develop a harmonized digital soil map of the world. Ispra, Italy, June 20-24, 2011
- Visited Dr. Alex McBratney, Pro-Dean Faculty of Agriculture, Food and Natural Resources; Professor of Soil Science; Director of the Australian Centre for Precision Agriculture; Sydney University, Sydney, Australia (Dec. 10-19, 2010). Preparation for collaborative proposal to NSF.
- Member of the Global Research Alliance on Agricultural Greenhouse Gases (2010 – present)
- Attended workgroup meeting of Global Soil Map.net project, Rome, Italy, May 23, 2010.
- Co-hosted international visitor and guest speaker at the Hubbell seminar series, Dr. Johan Bouma, Emeritus Professor of Soil Science, Wageningen University, The Netherlands, Gainesville, FL (April 15-16, 2010)
- Attended Workshop UF/IFAS International Programs "Pathways to Effective International Engagement", Gainesville, FL (3/4/2010)
- *117 presentations at international meetings* in a variety of countries (among them 17 invited *keynote talks*) (as of 9/2020)
- *Taught 2 international workshops and 2 short courses (India)*
- Invited to visit Tamil Nadu Agricultural University, India to build collaborative educational programs; taught an ad-hoc workshop on RLOs and gave two talks (eLearning & GIS-Supported Digital Soil Mapping) (7/2009)
- *Member of the North American Global Soil Map Node Working Group* (5/2009 – present) which is part of the Global Soil Map.net Project
- Hosted int. visitor Dr. Alex McBratney, Sydney University, Australia (May 19-22, 2009). Agreement of Cooperation between UF and University of Sydney.
- Visited Dr. Ron Corstanje and Dr. Thomas Myer at Cranfield University, United Kingdom, to initiate collaboration on research projects focused on soil carbon and pedometrics (May 1-6, 2009)
- Attended Workshop UF/IFAS International Programs "Building Effective International Partnerships", Gainesville, FL (4/7/2009)
- *Member of Global Soil Spectral Working Group – IUSS* (2008 – present)
- *Member of the Global Working Group of Digital Soil Mapping – IUSS* (2004 – present)
- *Member of the International Agricultural Learning Repositories Task Force (AgLR-TF)*, which provides guidance, standards, technologies, tools and recommendations for development of digital repositories of e-learning materials (2/2008 – present)
- Core member of the *International Open Agricultural Curriculum and Learning Initiative (AgroCuri)* – Consortium of university and CGIAR scientists & instructors supported by seed grant of the Bill and Melinda Gates Foundation (8/2008 – present). Full large-scale proposal submitted 7/2009 ($2.343 million; but not funded due to financial constraints).

- Worked on *international capacity building project: India-U.S. Agricultural Knowledge Initiative* Capacity Building in Water Management. Strengthening of individual and institutional capacity in DE and extension/outreach (2006 – 2009)
- Technical Research Cooperation with Dr. Maria de Lourdes Mendonça Santos (EMBRAPA-Solos "Soils") on project "Hybrid geospatial modeling of soil organic carbon in Rio de Janeiro and comparative study of the factors that determine the spatial distribution of soil organic carbon in Rio de Janeiro vs. Florida (Fall 2008)
- Invited by IFAS International Office to serve as prime contact to International Crops Research Institute for Semi-Arid Tropics (ICRISAT) (New Cooperative Venture) in two areas: (i) Distance Education and (ii) GIS applications (9/2007 – present)
- Meeting with delegation of Indian visitors including Dr. William Dar, Director General ICRISAT and Dr. V. Balaji, Head of Knowledge Management and Sharing, ICRISAT, University of Florida, Gainesville, FL (July 18-22, 2007)
- Meeting with Dr. V. Balaji, Head of Knowledge Management and Sharing, ICRISAT; Dr. Raghu Vardhan Reddy, Vice Chancellor, Acharya N.G. Ranga Agricultural University, India, University of Florida, Gainesville, FL (April 11-12, 2007)
- Hosted visitor Dr. M. Anji Reddy, Professor Environmental Science & Technology; Director, Institute of Science & Technology Jawaharlal Nehru Technological University, Hyderabad, India, University of Florida, Gainesville, FL (March 27, 2007)
- Helped to organize *Indo-US workshop on "Innovative E-technologies for Distance Education and Extension/Outreach for Efficient Water Management"*, Patancheru/Hyderabad, India, March 5-9, 2007. Presented four talks at the workshop; chaired two sub-sessions
- Invited to participate in U.S.-India Agricultural Knowledge Initiative – Curriculum Development Workshop, New Delhi, India (Jan. 22-24, 2007)
- Participated in international workshop "*Strengthening Agricultural and Environmental Capacities through Distance Education (SAEC-DE)*", Gainesville, FL (Dec. 6-8, 2006). Participants included E. Hesse, CIAT, Colombia; G. Kironchi, University of Nairobi, Kenya; Moses Tenywa, Makerere University, Uganda; V. Balaji and Barry Shapiro, ICRISAT, India; and K. Alluri, Commonwealth of Learning, Canada; U.S. – India Agricultural Knowledge Initiative Capacity Building project team members.
- Co-Convener Symposium "Diffuse Reflectance Spectroscopy, Soil Sensing, Remote Sensing and Image Analysis" Commission 1.5 Pedometrics – IUSS to be held at the World Congress of Soil Science, Philadelphia, PA (July 9-15, 2006)
- *Visited Nairobi University (Kenya) and Makerere University (Uganda)* (5/1/28 – 6/12/2005) as part of SACE-DE project coordinated through the IFAS International Programs Office. Participated in a 3-day planning workshop with African partner institutions and representative of the International Center for Tropical Agriculture, Cali, Columbia
- Participated in the prestigious *Forum for Agricultural Research in Africa (FARA) General Assembly "Innovations to Transform Agriculture for Improved Livelihoods and Development in Africa"*, Entebbe, Uganda (June 6-12, 2005)
- *Hosted the International Pedometrics 2005 "Frontiers in Pedometrics" Conference* in Naples, Florida (main organizer: Dr. Grunwald):
  - Sept. 9 – 10, 2005: Pre-Conference Workshop "Quantitative Visible and Near-Infrared Diffuse Reflectance Spectroscopy for Soil Characterization"
  - Sept. 12 – 14, 2005: Pedometrics Conference (3 keynote talks + 39 oral + 26 poster presentations = 69 presentations)
  - Sept. 15, 2005: Post-Conference Workshop – Everglades, Florida.

- *Vice Chair, Commission 1.5 Pedometrics of Div. 1 of the IUSS* (4/2004 – 4/2006)
- Chaired session "Internet-Based Teaching/Distance Education", Int. Conference on Education and Information Systems: Technologies and Applications, Orlando, Florida (July 14-17, 2005)
- Chairwoman of Topic 6 "New Environmental Covariates and New Sources of Environment Covariates for Digital Soil Mapping", Int. Workshop on Digital Soil Mapping, Montpellier, France (Sept. 15-17, 2004)
- Member of the organizing committee, Int. Workshop on Digital Soil Mapping, Montpellier, France (Sept. 15-17, 2004)
- *Secretary, Int. Working Group on Pedometrics – Provisional Commission IUSS* (11/2002 – 4/2004)
- Advising and mentoring of international visitors / scholars / scientists: See section Mentoring and Advising

Significance of international activities:

- Numerous trips to Africa and India have provided a transformative experience to learn about local and regional problems threatening the livelihood and health of people. In developing countries education is constraint by quality and accessibility to learning material, among many other factors, which limits individual and societal growth. Dr. Grunwald's scholarly activities have focused to improve education and research in Southeast Asia and Sub-Saharan Africa. Her involvement in capacity building projects in other countries allowed broadening her perspective. To solve global problems of significance, such as global climate change and degradation of soil and water resources and quality, require synergizing expertise and to think holistically. Grunwald's engagement in international activities allows taking the next step along this path.