**Name:  Sabine Grunwald**

**Title and department: Associate Professor, Soil and Water Science**

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**Education:**

B.S. -
M.S. Environmental Science, Justus von Liebig University, Giessen, Germany (1992)
Ph.D. Environmental Science, Justus von Liebig University, Giessen, Germany (1996)

**Research Interests (with focus on Tropical Agriculture)**

5 most significant publications:

Up-to-date publication list at :
http://grunwald.ifas.ufl.edu/Publications/publications.htm

Extramural support during past 5 years (below)

**Teaching Interests (with focus on Tropical Agriculture)**

Narrative: ½ page (below)

## *Extension/Outreach Interests (with focus on Tropical Agriculture)*

Narrative: ½ page (none)

## *International Activities (with focus on Tropical Agriculture)*

Narrative: ½ page of activities during last 10 years

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Dr. Grunwald has built a **research program** focused on topics of regional, national, and global significance including (i) carbon science (carbon cycling) in context of global climate warming and anthropogenic forcing functions (e.g. land use shifts), (ii) valuation of ecosystem services (e.g. carbon sequestration), (iii) geospatial assessment of soil and water quality, (iv) impact and risk assessment focused on the critical zone (soils), (v) rapid and cost-effective soil spectral sensing to predict standard and functional soil properties, and (vi) scaling of soil-environmental properties and ecosystem processes across expanding and contracting spatial scales (field, regional, and State) and through time. Her research team employs Geographic Information Systems, remote and soil sensing, geostatistics, statistics, and mechanistic simulation models. Her research emphasis on geospatial modeling of phosphorus, nitrogen, and other biogeochemical properties (2004-2006) has shifted over the past 3 years (2006-2009) to carbon science and global climate warming. Her USDA-funded project on "Rapid Assessment and Modeling of Soil Carbon Pools across Florida" was selected as a Core Project of the U.S. North American Carbon Program (NACP) that engages her in cutting edge research of national significance. Her recognition by peers in the profession at national and international level is evidenced by invitations to keynote talks, nomination/election to participate/chair workgroups, commissions, and others (e.g. Vice Chair of Commission 1.5 Pedometrics of the International Union of Soil Sciences). Currently, Dr. Grunwald serves as Associate Editor of the Soil Science Society of America Journal and Editorial Board of Geoderma, which are two high-impact soil science journals.

She attracted **external funding** (past 5 years) as PI of $1.65 million, co-PI of $3.65 million and total of $10.73 million (2004-2009), which has supported 5 Ph.D. students, 7 M.S. students, 6 Post-Doctoral Researchers, and technical/scientific staff. Her record includes 124 publications (2004-2009) of which 63 are peer-reviewed and published in high-impact journals. She edited a textbook (2006) on Environmental Soil-Landscape Analysis – Geographic Information Technologies and Pedometrics, which has brought recognition to her research program. Dr. Grunwald's mean impact factor of journal publications is 2.6 (maximum: 5.3), which is 1.5 times higher than the impact factor in the comparable Soil Science category (ISI Web of Knowledge) with a mean of 1.1. Research creates widespread impact not only through peer-refereed publications but also by engaging in the profession through international (42), national (56), regional/state (14), and local (51) presentations.

She **teaches** various graduate level (GIS in Land Resource Management, Soil Landscape Modeling), undergraduate level (GIS in Soil and Water Science), short courses and workshops. Her vision to translate research into Reusable Learning Objects (RLO) that are shared online in open-access mode was implemented in the EcoLearnIT RLO system ([http://ecolearnit.ifas.ufl.edu](http://ecolearnit.ifas.ufl.edu)) that has found widespread adoption by users at UF and around the globe. EcoLearnIT has developed into an online journal that combines interactive

features with online social collaborative components suitable to stimulate learning. Visionary thinking to encapsulate research into attractive digital formats (video, audio, artwork, animations) forms the applied research component of her program and provides linkages to extension and teaching.

**International activities:** http://grunwald.ifas.ufl.edu/international/index.htm

Her research laboratory (GIS Core Research Lab) has attracted visiting scientists, scholars, and interns from various countries including Belgium, Brazil, Burkino Faso, Columbia, England, France, India, and Spain.

She has been engaged in various international projects including (1) Strengthening agricultural and environmental capacity through distance education - partnership between UF, Center for International Center for Tropical Agriculture – CIAT, USAID, and University of Nairobi (Kenya), and Makerere University (Uganda); and (ii) U.S. India Agricultural Knowledge Initiative "Information and Communication Technologies for Capacity Building in Water Management: U.S. India Collaborative Extension/Outreach and Distance Education" with partners in India (International Crops Research Institute for Semi-Arid Tropics - ICRISAT, Hyderabad India; Acharya N. G. Ranga Agricultural University (ANGRAU) Hyderabad; Punjab Agricultural University (PAU), Ludhiana; Indian Council of Agricultural Research (ICAR); and Tamil Nadu Agricultural University (TNAU), Coimbatore**.**