

Curriculum Vitae
George Vellidis

Business Address

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Education

1983: B.S. in Agricultural Engineering, Virginia Tech
1985: M.S. in Agricultural Engineering, Virginia Tech
1989: Ph.D. in Agricultural and Biological Engineering with a minor area of study in Environmental Engineering, University of Florida

Summary of Research Activities over the Past Five Years

My primary area of research is precision agriculture. A second area of emphasis involves the application of engineering science to measure model, and manage the interaction between agricultural production systems and the environment. Often the two areas of emphasis blend.

Appointments

2012-current Professor, Crop & Soil Sciences Department, Tifton Campus, University of Georgia
2005-2012 Research, Extension, and Instruction Coordinator and Professor, Biological & Agricultural Engineering Department, Tifton Campus, University of Georgia
2004-2005 Professor of Biological & Agricultural Engineering, University of Georgia.
1995-2004 Associate Professor of Biological & Agricultural Engineering, University of Georgia.
1989-1995 Assistant Professor of Biological & Agricultural Engineering, University of Georgia.

Selected Publications and Other Creative Works (of 67 refereed journal articles, 11 book chapters, 152 other publications) **Indicates works published by graduate students or post-docs mentored by Dr. Vellidis*

- **Vellidis, G.** 2013. Cotton Yield Maps: Tools for Increasing Efficiency and Profitability. 24-minute webinar available through the Plant Management Network and sponsored by Cotton Inc. <http://www.plantmanagementnetwork.org/edcenter/seminars/cotton/CottonYieldMaps/>
- **Vellidis, G.,** M. Tucker, C. Perry, H. Henry, and R.W. Hill. 2013. *Licensing agreement* for the commercialization of the University of Georgia Smart Sensor Array (UGA SSA) for Scheduling Irrigation with Advanced Ag Systems of Dothan, AL, 20 September 2013.
- *Mehring, A., R.R. Lowrance, A.M. Helton, C.M. Pringle, A. Thompson, D.D. Bosch, and **G. Vellidis.** 2013. Interannual drought length governs dissolved organic carbon dynamics in blackwater rivers of the western upper Suwannee River basin. *Journal of Geophysical Research: Biogeosciences* 118:1636-1645. doi:10.1002/2013JG002415.
- *Jang, T., **G. Vellidis,** J.B. Hyman, E. Brooks, L.A. Kurkalova, J. Boll, and J. Cho. 2012. Model for prioritizing best management practice implementation: Sediment load reduction. *Environmental Management* 51(1):209-224. DOI 10.1007/s00267-012-9977-4.

- **Vellidis, G.**, B. Ortiz, J. Beasley, R. Hill, H. Henry, and H. Brannen. 2013. Using RTK-based GPS guidance for planting and inverting peanuts. In: J.V. Stafford (Ed.), Precision Agriculture 2013 - Proceedings of the 9th European Conference on Precision Agriculture (9ECPA), Lleida, Spain – *received best paper award*.
- **Vellidis, G.**, Tucker, M., Perry, C., Reckford, D, Butts, C., Henry, H., Liakos, V., Hill, R.W., and Edwards, W. 2013. A soil moisture sensor-based variable rate irrigation scheduling system. In: J.V. Stafford (Ed.), Precision Agriculture 2013 - Proceedings of the 9th European Conference on Precision Agriculture (9ECPA), Lleida, Spain.
- *Liakos, V., Vellidis, G., G. Harris, R., Hill, and H. Henry, W. 2013. Variable rate application of side-dress nitrogen on cotton in Georgia, US. In: J.V. Stafford (Ed.), Precision Agriculture 2013 - Proceedings of the 9th European Conference on Precision Agriculture (9ECPA), Lleida, Spain.
- **Vellidis G.** and H.S. Brannen. 2012. Cotton yield maps: Tools for increasing efficiency and profitability. 8-page, full color booklet summarizing benefits of using cotton yield maps. Booklet funded by Cotton Inc. and distributed at the 2013 Beltwide Cotton Conference, various other workshops, and county extension offices.
www.cottoninc.com/fiber/AgriculturalDisciplines/Engineering/Precision-Crop-Management-for-Cotton
- *Ortiz, B.V., D. Sullivan, C. Perry, and **G. Vellidis**. 2011. Delineation of management zones for southern root-knot nematode using fuzzy clustering of terrain and edaphic field characteristics, *Communications in Soil Science and Plant Analysis*, 42(16):1972-1994, DOI 10.1080/00103624.2011.591471.
- **Vellidis, G.**, H. Savelle, R. G. Ritchie, G. Harris, R. Hill, and H. Henry. 2011. NDVI response of cotton to nitrogen application rates in Georgia, USA. In: J.V. Stafford (Ed.), Precision Agriculture 2011 – Proceedings of the 8th European Conference on Precision Agriculture (8ECPA), Prague, Czech Republic, pp. 358-368.
- *Todd, M.J., R.R. Lowrance, P. Goovaerts, C.M. Pringle, **G. Vellidis**. 2010. Geostatistical modeling of the spatial distribution of sediment oxygen demand within a coastal plain blackwater watershed. *Geoderma* 159(1-2):53-62, DOI 10.1016/j.geoderma.2010.06.015.
- **Vellidis, G.**, M. Tucker, C. Perry, C. Kvien, and C. Bednarz. 2008. A real-time wireless smart sensor array for scheduling irrigation. *Computers and Electronics in Agriculture* 61(1):44-50.
- **Vellidis, G.**, V. Garrick, S. Pocknee, C. Perry, C. Kvien, M. Tucker. 2007. How wireless will change agriculture. In: Stafford, J.V. (Ed.), Precision Agriculture '07 – Proceedings of the Sixth European Conference on Precision Agriculture (6ECPA), Skiathos, Greece, pp. 57-67. Invited Keynote Presentation.
- *Gay, P., **G. Vellidis**, and J.J. Delfino. 2006. The attenuation of atrazine and its major degradation products in a restored riparian buffer. *Transactions of the ASABE* 49(5) 1323-1339.
- **Vellidis, G.**, P. Barnes, D.D. Bosch, A.M. Cathey. 2006. Mathematical simulation tools for developing dissolved oxygen TMDLs. *Transactions of the ASABE* 49(4) 1003-1022.
- **Vellidis, G.**, M.A. Tucker, C.D. Perry, T. Wells, and C. Kvien. 2004. Predictive cotton lint yield maps from aerial photographs. *Precision Agriculture* 5(6):547-564.
- **Vellidis, G.**, C.D. Perry, G. Rains, D.L. Thomas, N. Wells, C.K. Kvien. 2003. Simultaneous assessment of cotton yield monitors. *Applied Engineering in Agriculture* 19(3):259-272.

- Suttles, J.B., **G. Vellidis**, D. Bosch, R. Lowrance, J.M. Sheridan, and E.L. Usery. 2003. Watershed-scale simulation of sediment and nutrient loads in Georgia coastal plain streams using the annualized AGNPS model. *Transactions of the ASAE* 46(5):1325-1335 – *received ASAE Superior Paper Award for 2004*.
- **Vellidis, G.**, C.D. Perry, J.S. Durrence, D.L. Thomas, R.W. Hill, C.K. Kvien, T.K. Hamrita. 2003. *U.S. Patent 6,525,276* issued 25 February 2003 for “Crop Yield Monitoring System”, Principal Inventor. Technology was licensed by WAG Corporation of Tupelo, MS.
- **Vellidis G.**, R. Lowrance, P. Gay, and R.K. Hubbard. 2003. Nutrient transport in a restored riparian wetland. *Journal of Environmental Quality* 32(2):711-726.
- **Vellidis, G.**, C.D. Perry, J.S. Durrence, D.L. Thomas, R.W. Hill, C.K. Kvien, T.K. Hamrita, and G.C. Rains. 2001. The peanut yield monitoring system. *Transactions of the ASAE* 44(4):775-785.

Recent Workshops, Trainings, and Short Courses

- TransAtlantic Precision Agriculture Consortium Workshops. Karditsa, Greece, 15 March 2013, 150+ attendees; Padova, Italy, 18 March 2013, 30+ attendees; Potsdam, Germany, 20 March 2013, 20+ attendees; Tifton, Georgia, USA, 25 February 2014, 141 attendees; Headland, Alabama, USA, 27 February 2014, 76 attendees; Shorter, Alabama, USA, 28 February 2014, 64 attendees.
<http://vellidis.org/tapac>
- Using the University of Georgia Smart Sensor Array for Managing Water Resources in a Variable Climate, University of Georgia Stripling Irrigation Research Park Annual Field Day, 250 participants, 1 August, 2013.
- Precision Placement of Water in Southern Crops, Certified Crop Advisors Agronomic 2-Day Workshop, (32 crop advisors), Valdosta, 22 January.
- Precision Ag Tools in Peanut Production, 2013 Peanut Production Update and Agent Training, (80 county agents), University of Georgia Tifton Campus Conference Center, Tifton, 16 January 2013.
- Variable Rate Technology for Lime, Nutrients and Seed, Southern States Growmaster Program (Georgia, Florida, Alabama) (60 participants), Perry, Georgia, 15 December, 2012

Recent Awards and Recognitions

- Invited speaker to a special 2013 Soil Science Society of America Symposium on sensing for crop water management, ASA, CSSA, SSSA International Annual Meetings, 03-06 November, Tampa, Florida – presentation titled: *A soil moisture sensor-based variable rate irrigation scheduling system*
- Keynote speaker at the ESNA 2013 – the annual international conference of the European Society for New methods in Agricultural research, 04-08 September, Thessaloniki, Greece – presentation titled: *Precision irrigation – the next big challenge for sustainable agriculture*
- Keynote Speaker at the XXXV CIOSTA & CIGR V Conference, 03-05 July, Billund, Denmark. The CIOSTA conferences focus on the optimization of bio-production management and work organization based on system engineering approaches and innovative technologies – presentation titled: *Precision irrigation – the next big challenge for precision farming*
- University of Georgia Tifton Campus 2012 Award of Excellence for Research
- Invited to attend and present two precision agriculture papers at Agri-Sensing 2011 – the International Symposium on Sensing in Agriculture at the Technion in Haifa, Israel, February 21-24. All speakers were invited. The symposium was attended by 247 participants – presentations titled: *Wireless sensor network applications in agriculture: Is the wireless revolution coming to*

agriculture? and *Using GreenSeeker® to drive variable rate application of PGRs, defoliants, and nitrogen on cotton.*

- Keynote speaker at the 6ECPA – the 6th European Conference on Precision Agriculture scheduled for 03-07 June 2007 – presentation titled: *How wireless will change agriculture.*

Synergistic Activities

- Leader and developer of the TransAtlantic Precision Agriculture Consortium (TAPAC) – a group of 3 American and 3 European universities dedicated to internationalizing the teaching, research and extension programs of the member universities – www.vellidis.org/tapac
- One of five creators and now vice-chair of NESPAL – the National Environmentally Sound Production Agriculture Laboratory at the University of Georgia – www.nespal.org.
- Leader of a USDA-NIFA Conservation Effects Assessment Program (CEAP) project and team member of the USDA-NIFA National CEAP Synthesis project.
- Adjunct Professor in the Odum School of Ecology at the University of Georgia; Plant, Soil and Agricultural Systems Department, Southern Illinois University; and the Dimitris Perrotis College of Agricultural Studies, Thessaloniki, Greece
- Teaching:
 - ATPC 3030 – *Principles of Precision Agriculture* (every Fall semester)
 - APTC 3080 – *Introduction to Environmental Science and Engineering* (every Fall semester)

Collaborators within the Past 48 Months

- *Scientific Collaborators:* John Beasley, Guy Collins, Gary Hawkins, Calvin Perry, Catherine Pringle, John Snider (University of Georgia); Clyde Fraisse, Kati Migliaccio, and Kelly Morgan (University of Florida); John Fulton and Brenda Ortiz (Auburn University); David Bosch, Michael Jenkins, Richard Lowrance, and Matthew Smith (USDA-ARS); Jan Boll and Erin Brooks (University of Idaho); Tammo Steinhuis (Cornell University); Karen Levy (Emory University); Michele Jay-Russell (UC Davis); Athanasios Gertsis (Perrotis College of Agricultural Studies); Theofanis Gemtos (Panepistimio Thessalias); Francesco Morari (Universita Degli Studi di Padova); Markus Gandorfer (Technische Universität München)
- *Post-Doctoral Associates Advised:* Jaepil Cho (Research Scientist, APEC Climate Center, Korea), Taeil Jang (Assistant Professor, Chonbuk National University, Korea), Moukaram Tertuliano (current), Vasilios Liakos (current), Xi Liang (current)

Ph.D. Thesis Advisor: Dr. Allen Smajstrla, Agricultural & Biological Engineering Department, University of Florida