JOAQUIN CASANOVA
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A. Professional Preparation

UF, Gainesville	Electrical Engineering	PhD, May 2010
UF, Gainesville	Agricultural and Biological Engineering	ME, December 2007
UF, Gainesville	Agricultural and Biological Engineering	BS, December 2006

B. Appointments

Research Assistant Professor, University of Florida	August 2016-present
Senior Engineer, University of Florida	November 2013-June 2016
Research Engineer, USDA	May 2010-October 2013

C. Products

30 technical publications in peer-reviewed journals and conference proceedings. 2 patents awarded.

Most closely related to the proposed project:

Casanova, J. J., O'Shaughnessy, S. A., Evett, S. R., & Rush, C. M. (2014). Development of a wireless computer vision instrument to detect biotic stress in wheat. Sensors, 14(9), 17753-17769.

Schwartz, R. C., Casanova, J. J., Bell, J. M., & Evett, S. R. (2014). A reevaluation of time domain reflectometry propagation time determination in soils. *Vadose Zone Journal*, *13*(1).

Casanova, J. J., Schwartz, R. C., & Evett, S. R. (2014). Design and field tests of a directly coupled waveguide-on-access-tube soil water sensor.*Applied Engineering in Agriculture*, *30*(1), 105-112.

Casanova, J., O'Shaughnessy, S., & Evett, S. (2013, November). Wireless computer vision system for crop stress detection. In ASA-CSSA-SSSA Annual Meeting Abstracts (p. 123). ASA-CSSA-SSSA Annual Meeting Abstracts. Session 196-7.

Casanova, J. J., Evett, S. R., & Schwartz, R. C. (2012). Design and field tests of an access-tube soil water sensor. *Applied Engineering in Agriculture*,*28*(4), 603-610.

Casanova, J. J., Evett, S. R., & Schwartz, R. C. (2012). Design of access-tube TDR sensor for soil water content: Testing. *Sensors Journal, IEEE*,*12*(6), 2064-2070.

Casanova, J. J., Evett, S. R., & Schwartz, R. C. (2012). Design of access-tube TDR sensor for soil water content: Theory. *Sensors Journal, IEEE*,*12*(6), 1979-1986.

Garnica, J., Casanova, J., & Lin, J. (2011, May). High efficiency midrange wireless power transfer system. In *Microwave Workshop Series on Innovative Wireless Power Transmission: Technologies, Systems, and Applications (IMWS), 2011 IEEE MTT-S International* (pp. 73-76). IEEE.

Casanova, J. J., Taylor, J. A., & Lin, J. (2010). Design of a 3-D fractal heatsink antenna. *Antennas and Wireless Propagation Letters, IEEE*, *9*, 1061-1064.

Low, Z. N., Casanova, J. J., Maier, P. H., Taylor, J. A., Chinga, R. A., & Lin, J. (2010). Method of load/fault detection for loosely coupled planar wireless power transfer system with power delivery tracking. *Industrial Electronics, IEEE Transactions on*, *57*(4), 1478-1486.

Casanova, J. J., Low, Z. N., & Lin, J. (2009). Design and optimization of a class-E amplifier for a loosely coupled planar wireless power system.*Circuits and Systems II: Express Briefs, IEEE Transactions on*, *56*(11), 830-834.

Casanova, J. J., Low, Z. N., & Lin, J. (2009). A loosely coupled planar wireless power system for multiple receivers. *Industrial Electronics, IEEE Transactions on*, *56*(8), 3060-3068.

Casanova, J. J., Judge, J., & Jang, M. (2007). Modeling transmission of microwaves through dynamic vegetation. *Geoscience and Remote Sensing, IEEE Transactions on*, *45*(10), 3145-3149.

D. Synergistic Activities

Main Activities

Dr. Casanova is a research assistant professor in the Department of Electrical and Computer Engineering at the University of Florida. His main research activities are electromagnetic sensors, instrumentation design, and machine intelligence applications. Previously he did research with the USDA in these areas and developed chemistry instrumentation for UF's Chemistry Department.

Professional Leadership

2004–present Member American Society of Agricultural and Biological Engineers (ASABE)
2006–present Member Institute of Electrical and Electronics Engineers (IEEE)

E. Collaborators & Other Affiliations

Collaborators and Co-Editors (within the last 48 months)

C. Li (TTU), R. Miyamoto (Oceanit), R. Yost (U. Florida), T. Casey (U. Florida), S. Anderson (Acclima), R. Schwartz (USDA), S. Evett (USDA), S. O'Shaughnessy (USDA).