Announcing the Final Examination of Suleiman Alsweiss for the degree of Doctor of Philosophy

Time & Location: March 25, 2011 at 11:30 AM in HEC, ENGR III 356
Title: AN IMPROVED OCEAN VECTOR WINDS RETRIEVAL APPROACH USING COMBINED DUAL FREQUENCY SCATTEROMETER AND MULTI-FREQUENCY MICROWAVE RADIOMETER MEASUREMENTS

This dissertation will specifically address the current issue of improving scatterometer retrieved ocean vector winds (OVW) quality especially in extreme wind events. It will propose a novel active/passive OVW retrieval algorithm that combines dual frequency (C- and Ku-band) scatterometer measurements with simultaneous multi-frequency passive microwave observations allowing greater wind speed sensitivity in the hurricane wind speed regime.

The algorithm is based on an instrument conceptual design, i.e., the Dual Frequency Scatterometer (DFS) developed by Jet Propulsion Laboratory (JPL) that will share the platform with the Advanced Microwave Scanning Radiometer (AMSR) providing a unique dataset of simultaneous active and passive measurements.

The synergy of these active and passive measurements is anticipated to greatly improve the accuracy of the measurements, and therefore, enhance the usefulness of scatterometer measurements in extreme wind events.

Major: Electrical Engineering

Educational Career:
Bachelor's of Electronics Engineering, BS, 2004, Princess Sumayya University for Technology
Master's of Electrical Engineering, MS, 2007, University of Central Florida

Committee in Charge:
Dr. W. Linwood Jones, Chair, Electrical Engineering & Computer Science
Dr. Wasfy B. Mikhael, Electrical Engineering & Computer Science
Dr. Michael Georjopolous, Electrical Engineering & Computer Science
Dr. Svetla H. Veleva, Jet Propulsion Laboratory

Approved for distribution by Dr. W. Linwood Jones, Committee Chair, on March 3, 2011.

The public is welcome to attend.