KLAUS OKKELBERG

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US Citizen

OBJECTIVE

Ph.D. student in electrical engineering seeking an internship for summer 2015

EDUCATION

Georgia Institute of Technology, Atlanta, GA — 2014–Present
Ph.D. in Electrical and Computer Engineering
Systems/Controls and Telecommunications

University of New Orleans, New Orleans, LA — 2011–2014
M.S.E. in Electrical Engineering
Thesis on nonlinear filtering for battery health management
GPA: 4.0/4.0

Pennsylvania State University, University Park, PA — 2007–2011
B.S. in Electrical Engineering
Schreyer Honors College Scholar
Thesis on nonlinear control system for nuclear magnetic spectroscopy
GPA: 3.8/4.0

EXPERIENCE

Xilinx, Inc., San Jose, CA
Yong Wang
Intern — June 2014 – Aug. 2014
- Improved accuracy and speed of the simulation of simultaneous switching noise in FPGAs
- Developed theoretical model of switching noise magnitude

University of New Orleans, New Orleans, LA
Dr. Huimin Chen
Research Assistant — July 2012 – May 2014
- Studied accuracy and speed of various nonlinear filters as related to estimating battery state of charge
- Proposed adjustments to the Unscented Kalman Filter and the Cubature Kalman Filter that increase filtering stability and accuracy

Pennsylvania State University, University Park, PA
Dr. Jeffrey L. Schiano
Research Assistant — March 2010 – May 2011
- Researched a marginal oscillator with a nonlinear feedback element for use in nuclear magnetic spectroscopy
- Studied sampled-data implementation in presence of thermal noise
- Derived sensitivity of a Robinson marginal oscillator
- Optimized simulation model for speedup by a factor of 100

PROJECTS

- Adaptive observer for optimal impulse discharge of a battery
- Video jitter removal using point feature matching and phase correlation
- Image reconstruction from incomplete, quantized measurements using discretized solution of Euler-Lagrange equation
- Investigation of resonant tunneling through a double-barrier diode
- Quantum interference visibility in an oscillating macroscopic mirror
- High-speed adaptive decision feedback equalization for SerDes communications
- Digital clock with laser display system
- Domino tilings of rectangles with fixed width

PUBLICATIONS

"Comparison of Nonlinear Filtering Methods for Battery State of Charge Estimation" University of New Orleans, 2014.

"Conversion Gain and Sensitivity in Marginal Oscillators: Continuous and Sampled-Data Negative Resistance Converters" The Pennsylvania State University, 2011.

"The Pulsar: A Revolution in Display Technology" Pennsylvania Center for the Book, the Pennsylvania State University, 2010.

HONORS/AWARDS

SGT/NASA Ames Research Center Scholarship — 2012–2013
Schreyer Honors College Scholarship — 2007–2011

SKILLS

Applications: Matlab/Simulink, PSPICE, Multisim, Mathematica, Maple, AutoCAD, Inventor, Solidworks, Photoshop, MS Office, Minitab

Programming: C/C++, Java, Python, Visual Basic, Perl, Tcl/Tk, Matlab, LabView, LATEX

Miscellaneous: Good communication skills, strong problem solving ability, excellent at teamwork