

ALIA R. STRANDT
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EDUCATION:

- Master of Science Candidate in Electrical Engineering, December 2013 (expected)
Marquette University, Milwaukee, WI
Area of research: Pulse Width Modulation methods for multilevel electric drives
- Bachelor of Science in Electrical Engineering, May 2011
Marquette University, Milwaukee, WI
Major: Electrical and Electronic Engineering
Minor: Mathematics
Graduated Summa Cum Laude on May 22, 2011
Cumulative GPA: 3.979/4.000

ACADEMIC EXPERIENCE:

- Research Assistant, Marquette University, May 2011 – Present
 - Development of complete motor-drive models via ANSYS Simplorer-Maxwell co-simulation
 - Analysis of PWM control algorithms for three-level voltage source inverters
 - Modeling of synchronous generators using MATLAB and Simulink
- Teaching Assistant, Marquette University, September 2011 – Present
 - Analog Electronics Laboratory, senior level course, Fall 2011
 - Digital Electronics Laboratory, junior level course, Spring 2012
 - Freshman Electrical Engineering Seminar 1, freshman level course, Fall 2012 and 2013
 - Freshman Electrical Engineering Seminar 2, freshman level course, Spring 2013

INDUSTRIAL EXPERIENCE:

- Hardware Engineering Co-Op
Rockwell Automation, Control and Visualization Business, Milwaukee, WI, June 2008 – August 2011
 - Provided design support and performed functional and system testing for internal power supplies of several HMI products
 - Designed, simulated, and tested a current driver circuit for the LED backlight of the display in a new HMI product
 - Designed and documented a method to estimate the expected life of the LED backlight in an HMI product display
 - Determined the optimal over-temperature trigger value in the CPU of a new HMI product which protects the product in the case of overheating the CPU

PUBLICATIONS:

- J. He, A. Strandt, A. Manarik, P. Zhang, N.A.O. Demerdash, “Diagnosis of Stator Inter-Turn Short-Circuit Faults of an IPM Synchronous Machine Using a Space-Vector Pendulous Oscillation Method in Comparison to Other Well-Established Techniques,” *2013 IEEE Power & Energy Society General Meeting (PES’13) Panel Presentation*, Vancouver, BC, Canada, July 21-25, 2013.
- J. He, A. Strandt, A. Manarik, P. Zhang, and N.A.O. Demerdash, “Diagnosis of Stator Short-Circuit Faults in an IPM Synchronous Machine Using a Space-Vector Pendulous Oscillation Method,” *Proceedings of the IEEE International Electric Machines and Drives Conference 2013 (IEMDC’13)*, Chicago, IL, May 12-15, 2013.

PROFESSIONAL AFFILIATIONS

- Student Member of the IEEE
- Member of IEEE – Eta Kappa Nu, Beta Omicron Chapter
- Member of Tau Beta Pi, WI-Beta Chapter

SKILLS

- MathWorks MATLAB – scripting, data manipulation and visualization
- MathWorks Simulink – power system modeling using SimPowerSystems
- ANSYS Simplorer – system modeling and simulation
- National Instruments MultiSim – circuit simulation
- National Instruments LabVIEW – data acquisition
- LaTeX – writing technical documents
- Java Programming