Jonas A. Kersulis

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Education

PhD Candidate *Enrolled Fall 2013*

University of Michigan Electrical Engineering: Systems

− Advisor: Dr. Ian Hiskens
− Currently funded by Department of Energy Grid Science Initiative
  via Los Alamos National Lab

Bachelor of Science in Electrical Engineering *Graduated May 2013*

University of Missouri—St. Louis and Washington
University in St. Louis Joint Engineering Program

− GPA: 4.0

Awards and Honors

First Place Poster in Power and Energy *2014*

University of Michigan
Engineering Graduate Symposium

Academic Fellowship *2013-2014*

University of Michigan

Chancellor's Scholarship *2009-2013*

University of Missouri-St. Louis

Boeing Engineering Scholarship *2012-2013*

Boeing Corporation

Citizens for Engineering Scholarship *2010-2011*

Citizens for Engineering

Engineering Alumni Scholarship *2010-2011*

Engineering Alumni Association

Presentations and Publications

IEEE PES Innovative Smart Grid Technologies – Asia 2016 *11/29/2016*

Renewable Voltage Regulation and the Transformer Tapping Trade-off

− Format: Conference paper
− Co-author: Dr. Ian Hiskens of Michigan

IEEE PowerTech Eindhoven 2015 *6/29/2015*

Temperature-based Instanton Analysis:
Identifying Vulnerability in Transmission Networks

− Format: Conference paper
− Co-authors include Dr. Ian Hiskens of Michigan and Dr. Michael Chertkov of LANL

Grid Science Winter School *1/12/2015*

Introduction to Julia and IJulia:
Optimization tools and a platform for numerical experiments

− Format: Interactive computing session
− Collaboration with Miles Lubin of MIT and Yury Dvorkin of Univ. of Washington

Grid Science Winter School Poster Session *1/11-14/2015*

Approximate Current Instanton Analysis:
Detecting Vulnerability in the Power Grid

− Format: Poster presentation

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University of Michigan Engineering Graduate Symposium *11/14/2014*
Approximate Current Instanton Analysis:
Detecting Vulnerability in the Power Grid
− Format: Poster presentation

Los Alamos National Lab Grid Science Student Seminar *7/31/2014*
Instanton Analysis with Non-flat Voltage Profiles
and Current Magnitude Constraints
− Format: Talk
− Host: Dr. Michael Chertkov

UM—St. Louis Undergraduate Research Symposium (URS) *4/29/2011*
New York City Blackout of 1977: Life in the Dark
− Format: Poster presentation
− Advisor: Dr. Robert Wilson

Skills

Various languages
− Julia: language structure, general technical computing, registered package author
− MATLAB: general technical computation, visualization
− Python: technical computing with NumPy and SciPy, Matplotlib visualization, IPython notebook workflow
− AMPL: formulation of optimization problems, format of output
− Visual Basic for Applications: automated generation of charts, graphical dashboards, interactive checklists
− HTML, CSS, JavaScript: basic web design
− D3.js: visualization of power network graphs

Data analysis and presentation
− Two-time GSI for EECS 551, Matrix Methods for Signal Processing with Professor Raj Nadakuditi
− Analysis, interpretation, and visual and tabular presentation of large datasets
− Data-ink maximization, graphical revision, and viewing architecture techniques

Volunteer Experience

Student Advisory Board Member *2010-2013*
− Met once per semester with Dean Joseph O'Sullivan and Dean Bernard Feldman of the Engineering
  program, along with Faculty, Program Coordinators, and two fellow students
− Provided communication channel between undergraduate student body and departmental administration
− Appraised effectiveness of the program based on student perspectives

H.I.S. K.I.D.S. Counselor-In-Training, Counselor, Group Leader *2008-2013*
− Worked at a weeklong summer camp for children with cancer and their siblings
− Trained to be a Counselor in 2008
− As a Counselor, assisted Group Leaders in caring for children in 2009-2011
− As a Group Leader, looked after physical and emotional needs of six children in summer 2012

Origami Booth Volunteer *2008-2012*
Missouri Botanical Garden Japanese Festival
− Taught origami to passersby as part of origami booth team

Martin Luther King Day of Service Photographer *2011*
− Photographed and participated in the painting of two bathrooms at Logos School in St. Louis

Relay for Life Participant *2011*
− Walked in American Cancer Society's Relay for Life hosted by UMSL