

Education

PhD Candidate	2013 - present
<i>University of Michigan Electrical Engineering: Systems</i>	
<ul style="list-style-type: none"> – Advisor: Dr. Ian Hiskens – Currently funded by ARPA-E GRID DATA project 	
Bachelor of Science in Electrical Engineering	2009-2013
<i>University of Missouri—St. Louis and Washington</i>	
<i>University in St. Louis Joint Engineering Program</i>	
<ul style="list-style-type: none"> – GPA: 4.0 	

Awards and Honors

First Place Poster in Power and Energy	2014, 2016
<i>University of Michigan</i>	
<i>Engineering Graduate Symposium</i>	
Academic Fellowship	2013-2014
<i>University of Michigan</i>	
Chancellor's Scholarship	2009-2013
<i>University of Missouri-St. Louis</i>	
Boeing Engineering Scholarship	2012-2013
<i>Boeing Corporation</i>	
Citizens for Engineering Scholarship	2010-2011
<i>Citizens for Engineering</i>	
Engineering Alumni Scholarship	2010-2011
<i>Engineering Alumni Association</i>	

Teaching Experience, Presentations, and Publications

Graduate Student Instructor – EECS 460	Winter 2017
<i>Introduction to Control Systems</i>	
<ul style="list-style-type: none"> – Ran two weekly discussion sections for 85-student course – Supervised magnetic levitation lab – Professor: Dr. Necmiye Ozay 	
IEEE PES Innovative Smart Grid Technologies – Asia 2016	11/29/2016
<i>Renewable Voltage Regulation and the Transformer Tapping Trade-off</i>	
<ul style="list-style-type: none"> – Format: Conference paper – Co-author: Dr. Ian Hiskens of Michigan 	
IEEE PES Innovative Smart Grid Technologies – Asia 2016	11/29/2016
<i>Renewable Voltage Regulation and the Transformer Tapping Trade-off</i>	
<ul style="list-style-type: none"> – Format: Conference paper – Co-author: Dr. Ian Hiskens of Michigan 	
IEEE PowerTech Eindhoven 2015	6/29/2015
<i>Temperature-based Instanton Analysis:</i>	
<i>Identifying Vulnerability in Transmission Networks</i>	
<ul style="list-style-type: none"> – Format: Conference paper – Co-authors include Dr. Ian Hiskens of Michigan and Dr. Michael Chertkov of LANL 	
	(Section continues on next page)
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

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

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