



Nathaniel Tucker

Department of Electrical and Computer Engineering

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EDUCATION

Ph.D. in Electrical Engineering 2017-Current

University of California, Santa Barbara (UCSB)

Smart Infrastructure Systems Lab

Advisor: Mahnoosh Alizadeh

M.S. in Electrical Engineering 2016-2017

Santa Clara University (SCU)

Emphasis in Communication and Systems

Advisor: Maryam Khanbaghi

GPA: 4.00

B.S. in Electrical Engineering, B.S. in Computer Science 2012-2016

Santa Clara University (SCU)

Summa Cum Laude

GPA: 3.89

RESEARCH INTERESTS

- Smart Grid Technologies and Renewable Energy Integration
- Optimization and Routing in Electric Transportation Systems
- Urban Planning / Smart Cities / Architecture

JOURNAL PUBLICATIONS

1. N. Tucker and M. Alizadeh, “An Online Admission Control Mechanism for Electric Vehicles at Public Parking Infrastructures”, *IEEE Transactions on Smart Grid*, 2019, **Printed**.

CONFERENCE PUBLICATIONS

5. N. Tucker, B. Turan, and M. Alizadeh, “Online Charge Scheduling for Electric Vehicles in Autonomous Mobility on Demand Fleets”, *Intelligent Transportation Systems Conference (ITSC)*, 2019, **To Appear**.
4. B. Turan, N. Tucker, and M. Alizadeh, “Smart Charging Benefits in Autonomous Mobility on Demand Systems”, *Intelligent Transportation Systems Conference (ITSC)*, 2019, **To Appear**.

3. N. Tucker, B. Ferguson, and M. Alizadeh, "An Online Pricing Mechanism for Electric Vehicle Parking Assignment and Charge Scheduling", *IEEE American Control Conference (ACC)*, 2019, **To Appear**.
2. N. Tucker and M. Alizadeh, "Online Pricing Mechanisms for Electric Vehicle Management at Workplace Charging Facilities", *56th Allerton Conference on Communication, Control, and Computing*, 2018, **Printed**.
1. N. Tucker and M. Khanbaghi, "Jump Linear Quadratic Control for Energy Management of a Nanogrid", *IEEE American Control Conference (ACC)*, 2018, **Printed**.

PRESENTATIONS

3. 2019 Intelligent Transportation Systems Conference (ITSC), Auckland, NZ, Oct. 2019
2. 2019 American Control Conference (ACC), Philadelphia, PA, Jul. 2019
1. 2018 American Control Conference (ACC), Milwaukee, WI, Jun. 2018

AWARDS AND HONORS

- 2019 Winter Quarter Student Spotlight, UCSB Center for Control, Dynamical Systems, and Computation (CCDC)
- 2017 Outstanding Graduate Student/Researcher, Department of Electrical Engineering, Santa Clara University
- 2016 Outstanding Graduating Senior for both GPA and contribution to the department, Department of Electrical Engineering, Santa Clara University
- 2016 First in Graduating Class, Department of Electrical Engineering, Santa Clara University
- 2016 Top 5% in Graduating Class, Department of Computer Science and Engineering, Santa Clara University
- 2013 KEEN Innovation Challenge, Maker Lab, School of Engineering, Santa Clara University
- 2012-2016 Dean's List, School of Engineering, Santa Clara University

TEACHING & MENTORSHIP

@ UCSB & Port Hueneme Naval Base:

- Summer 2019: Problem-based Initiatives for Powerful Engagement and Learning In Naval Engineering and Science (PIPELINES) program. Mentored team of undergraduate students working on an underwater electronics project for the Navy.

@ University of California, Santa Barbara, ECE Department:

- Spring 2018: ECE 10C: Circuits, Devices, and Systems

@ Santa Clara University, ELEN Department:

- Spring 2017: ELEN 50: Electric Circuits
- Winter 2017: ELEN 50: Electric Circuits
- Fall 2016: ELEN 50: Electric Circuits
- Fall 2016: ELEN 130: Control Systems

SERVICE

Journal Reviewer:

- IEEE Transactions on Smart Grid
- IEEE Transactions on Intelligent Transportation Systems

Conference Reviewer:

- IEEE Conference on Decision and Control: 2019
- IEEE American Control Conference: 2019
- IEEE Power & Energy Society General Meeting: 2018, 2019
- IEEE GlobalSip: 2018, 2019
- IEEE ITSC: 2018, 2019
- IEEE SmartGridComm: 2018

Society Membership:

- IEEE, 2012-Current
- Tau Beta Pi Engineering Honor Society, 2014-Current
- Santa Clara University IEEE Branch, President, 2014

INDUSTRY EXPERIENCE

Lockheed Martin Space Systems Company
Systems Engineering Intern
Sunnyvale, CA

Summer 2016

Lockheed Martin Space Systems Company
Survivability Engineering Intern
Littleton, CO

Summer 2015

Cooper Environmental Services
Software Engineering Intern
Portland, OR

Summer 2014