Austin Robert Coffman

bubbaroney@ufl.edu | (561) 315-0088

Summary

PhD Candidate with control systems background seeking a position in the fields of renewable energy, control or network systems that utilizes my strong communication skills, ability to work independently or as part of a team, as well as my experience in mathematics, statistics, and estimation.

EDUCATION

PhD, Mechanical Engineering **Expected: May 2021**
University of Florida, Gainesville, FL **Starting Date: May 2017**

- Thesis: TBD
- Advisor: Prabir Barooah, PhD
- GPA: 3.60

MS, Mechanical Engineering **Graduation: May 2017**
University of Florida, Gainesville, FL **Starting Date: Aug 2016**

- Certification: Control Systems
- GPA: 3.7

BS, Mechanical Engineering **Graduation: May 2016**
University of Florida, Gainesville, FL **Starting Date: Aug 2012**

- GPA: 3.30, cum laude

RESEARCH & TEACHING EXPERIENCE

Research Interests: Distributed Control, Multi-Agent systems, Large Scale systems, energy storage, data analysis

Teaching Assistant **Aug 2018 – Dec 2018**
University of Florida, Department of Mechanical and Aerospace Engineering, Gainesville, FL

- Courses: Optimal Estimation and Kalman Filtering (Fall 2018)
- Prepare homework solutions
- Facilitate office hours thrice a week to support students
- Evaluate tests

Graduate Research Assistant **Aug 2017 – Present**
University of Florida, Department of Mechanical and Aerospace Engineering, Gainesville, FL

- Designed a distributed randomized controller for power grid applications
- Presented work at technical conferences and forums

PROFESSIONAL EXPERIENCE

Test Engineer **May 2015 – Aug 2015**
Pratt and Whitney, Jupiter, FL

- Worked as a test engineer for the A320-neo engine
- Determined which delays were most costly to time completion of activities

PRESENTATIONS

Controls Forum, University of Florida, Gainesville, FL **Feb 2018**
``A Study of Virtual Energy Storage From Thermostatically Controlled Loads Under Time-Varying Weather Conditions″

Controls Forum, University of Florida, Gainesville, FL **Nov 2018**
``Virtual Energy Storage from TCLs using QoS persevering local randomized control''

PUBLICATIONS

Preprints
Austin R. Coffman, Ana Busic, and Prabir Barooah, "Aggregate capacity for TCLs providing virtual energy storage with cycling constraints", accepted at *IEEE Conference of Decision and Control*, 2019.

Zhong Guo, Austin R. Coffman, Jeffrey Munk, Piljae Im, and Prabir Barooah, "Identification of aggregate building thermal dynamic model and unmeasured internal heat load from data", accepted at *IEEE Conference of Decision and Control*, 2019.

Austin R. Coffman, Neil Cammardella, Sean Meyn, and Prabir Barooah, "Aggregate capacity of TCLs with cycling constraints", submitted to *American Control Conference* (ACC), 2020.

Zhong Guo, Austin R. Coffman, and Prabir Barooah, "A grid-centric characterization of aggregate capacity for loads providing grid support services", submitted to *American Control Conference* (ACC), 2020.

Journals
Austin R. Coffman and Prabir Barooah, "Simultaneous identification of dynamic model and occupant-induced disturbance for commercial buildings", *Building and Environment*, 128, 153-160, 2018.

Conferences
Austin R. Coffman, Ana Busic, and Prabir Barooah, "A Study of Virtual Energy Storage From Thermostatically Controlled Loads Under Time-Varying Weather Conditions", *2018 High Performance Buildings conference*, West Lafayete, Indiana, 2018, pp. 1-10.

Austin R. Coffman, Ana Busic, and Prabir Barooah, "Virtual Energy Storage from TCLs using QoS persevering local randomized control", *2018 BuildSys*, Shenzhen, China, 2018, pp. 1-10.

HONORS & AWARDS

Graduate School Preeminence Award, University of Florida **Aug 2017**
Nims Institute Fellow **Aug 2017**

SKILLS & CERTIFICATIONS

Software/OS: Matlab, Windows, Linux
Programing Languages: C++, Java, LaTeX, Python
Relevant Coursework:
Major: Nonlinear Control Theory, Optimal Control,
Mathematics: Analysis, Probability Theory
Computer Science: Machine Learning & Pattern Recognition