Saman Cyrus

Contact Information

4235D-2 Wisconsin Institute for Discovery
University of Wisconsin-Madison
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Education

University of Wisconsin–Madison, Madison, Wisconsin, USA

Electrical and Computer Engineering (ECE) Department

- PhD Candidate, **Major:** ECE (Automatic Controls) **(Exp.) 2019**
  Minor: Computer Sciences,
  Done with the coursework & qualifying exam
  Adviser: Dr. Laurent Lessard

- M.Sc. in Electrical Engineering **05/2015**
  Thesis: Locational effects of variability of injected power on total cost

Mechanical Engineering Department

- M.Sc. in Mechanical Engineering **(Exp.) 05/2018**

Computer Science (CS) Department

- M.Sc. in Computer Sciences, Optimization **05/2017**

K.N.Toosi University of Technology

Electrical Engineering Department

- M.Sc. in Electrical Engineering-Control **02/2013**
  Thesis: Fast Optimization Algorithms in Model Predictive Control

Iran University of Science & Technology

Electrical Engineering Department

- B.Sc. in Electrical Engineering-Control **10/2009**

Research Interests

Optimization, Machine Learning, Robust Control, Model Predictive Control

Teaching Experience

University of Wisconsin–Madison

- **Teaching Assistant** for Physics 109, Physics in The Arts 2015-2016
- **Teaching Assistant** for ECE 271, Electronics Lab., 2016-2017
- **Teaching Assistant** for Math/Stat/CS 525, Linear Programming Fall 2016

K.N.Toosi University of Technology

- **Teaching Assistant** for Linear Control Systems
- **Teaching Assistant** for Modern Control Engineering
- **Teaching Assistant** for Probability and Statistics

Iran University of Science and Technology

- **Teaching Assistant** for Electricity Physics
- **Teaching Assistant** for Electronics I

Work Experience

PEOPLE Program

- Weekend night-shift office lead Summer 2015, 2016
- Engineering instructor of P1 students, 3-week program Summer 2015, 2016

Analytical Instrumentation Engineer, PSQ Co., Iran 2010- 2013
More than 3 years of experience in developing and designing online automation equipment for monitoring and controlling analysis systems. Ability to analyze large amount of data and prepare appropriate solutions. Familiarity with different kinds of liquid & gas analyzers, pH, conductivity, gas chromatograph, oxygen analyzer.

Coursework

- **Engineering**

Course	Number	Institution
Linear Systems	ECE 717	UW–Madison
Optimal Systems	ECE 719	UW–Madison
Probability and Random Processes	ECE 730	UW–Madison
Nonlinear Systems	ECE 817	UW–Madison
Advanced Robotics	ECE/ME 739	UW–Madison
Physics-Based Modeling for Comp. Cntrl	ME 547	UW–Madison
Dynamics of Controlled Systems	ME 746	UW–Madison
Hybrid Control Systems		KNTU
Robust Control Systems		KNTU
Optimal Control Systems		KNTU
Fuzzy Control Systems		KNTU
Modern Control		IUST
Feedback Control Systems		IUST
Industrial Control systems		IUST
Operational Research		IUST

- **Computer Science & Math**

Course	Number	Institution
Introduction to Algorithms	CS 577	UW–Madison
Pattern Recognition	CS 532	UW–Madison
Linear Programming	CS 525	UW–Madison
Advanced Linear Programming	CS 526	UW–Madison
Stochastic Programming	CS 719	UW–Madison
Integer Programming	CS 720	UW–Madison
Nonlinear Programming I	CS 726	UW–Madison
Convex Analysis	CS 727	UW–Madison
Nonlinear Programming II	CS 730	UW–Madison
Artificial Neural networks and Fuzzy logic	CS 539	UW–Madison
Wireless Networks	CS 707	UW–Madison
Numerical Linear Algebra	CS 513	UW–Madison
Mathematical Analysis	Math 521	UW–Madison
Advanced Engineering Mathematics		KNTU
Probability and Statistics		IUST

Relevant Skills

Languages:	English, Persian, Arabic(fair), Spanish(beginner)
Typesetting:	Word, LaTeX
OS:	Windows, Ubuntu
Other:	C++ (Intermediate), Python (familiar), Matlab(Professional), Excel (Professional), Mathematica (Intermediate), Mql4, GAMS(Intermediate)

PUBLICATIONS

Cyrus, S., Bryan Van Scoy, Laurent Lessard, "On Necessity and Sufficiency of the Circle Criterion", In Preparation.

Cyrus, S., Khaki-Sedigh, A., "Fast optimization algorithms in model predictive control," In Preparation

Cyrus, S., Hu B., Bryan Van Scoy, Laurent Lessard, "A Robust Accelerated Optimization Algorithm for Strongly Convex Functions", *To Appear, American Control Conference, 2018.*

Cyrus, S., and Bernard L. "Locational effects of variability of injected power on total cost." *Power and Energy Conference at Illinois (PECI), 2015 IEEE.* IEEE, 2015.

REFERENCES

Prof. L. Lessard, Professor
ECE Department,
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Prof. R. Nowak, Professor
ECE Department,
University of Wisconsin- Madison
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