Ehsan Salimi

Coordinated Science Lab
University of Illinois at Urbana-Champaign
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Interests

Algorithms, Data Analysis, Machine Learning, Optimization

Education

2011- 2015 (expected Aug.) **Ph.D. in Industrial Engineering**, *GPA 3.86/4.00.*
University of Illinois at Urbana-Champaign

2008- 2010 **M.Sc. in Industrial Engineering**, *GPA 4.00/4.00.*
University of South Florida

2003- 2007 **B.Sc. in Industrial Engineering**, *GPA 17.06/20.*
University of Tehran, Iran

Research Experience

2011/01- **University of Illinois at Urbana-Champaign**, *Graduate researcher.*
- Developed a polynomial time algorithm for verifying convexity of integer sets.
- Utilized computational geometry to develop a dead/live-lock avoidance paradigm in Discrete Event Systems.
- Analyzed social network of author/citation in DAC conference.

2008/01- 2010/08 **University of South Florida**, *Graduate researcher.*
-Developed an optimization model for revenue redistribution in electric power markets.

2007 **University of Tehran**, *Undergrad research assistant.*
- Developed an algorithm for a multi-criteria scheduling problem.

Internship

2013/05- 2013/08 **Anheuser Busch Inbev Research Lab**, *Data analyst intern.*
- Collaborated with revenue management and sales technology departments on a large scale data initiative on customer profiling.
- Identified the sales trends using machine learning methods, utilizing different social media databases such as Factual, Yelp, and Foursquare (done in R).

2006-2007 **Research Institute of Energy Management and Planning**, *Decision making analysis intern.*
- Developed a framework for ranking the power plants in Tehran.

Publications

Journal Papers

- E. Salimi, R. S. Sreenivas, " On Invariant-Based Monitors that Enforce Liveness in a Class of Partially Controlled General Petri Nets", *IEEE transaction on Automatic Control*, To appear November 2015.
- E. Salimi, R. S. Sreenivas, "On Convexity of Right-Closed Integral Sets", *Journal of Discrete Mathematics*, February 2015, submitted.
- E. Salimi, N. Somnath, R. S. Sreenivas, "Some observations on the maximally permissive liveness enforcing supervisory policy for a class of weighted petri nets", *IEEE Transactions on Automation Science and Engineering*, September 2014, Under review.
- A. Rahimi-Vahed, M. Dangchi, H. Rafiei and E. Salimi, "A novel hybrid multi-objective shuffled frog-leaping algorithm for a bi-criteria permutation flow shop scheduling problem", *The International Journal of Advanced Manufacturing Technology*, June 2008.

Conference Paper

- E. Salimi, R. S. Sreenivas" On Supervisory Policies that Enforce Liveness in Controlled Petri Nets that are Similar", *IEEE International Conference on Cybernetics and Intelligent Systems (CIS)*, July 2015

- E. Salimi, N. Somnath, R. S. Sreenivas "A Tutorial on the Synthesis of the Maximally Permissive Liveness Enforcing Supervisory Policy in Discrete-Event/Discrete-State Systems Modeled by a Class of General Petri Nets", in Proceedings of The *First Indian Control Conference (ICC)*, Madras, January 2015
- T. K. Das, P. Rocha, E. Salimi"A Two-Tier Matrix Game Approach for Obtaining Joint Bidding Strategies in FTR and Energy Markets", *INFORMS Annual Meeting*, Octeber 2009

Teaching Exprience

2012-2015 **GE 101: Engineering Graphics and Design**, *University of Illinois at Urbana-Champaign*, Instructor.
-Responsible for teaching the modeling and sketching labs, organizing and assisting the student teams for final projects

Fall 2012 **GE 300: Engineering Statistics**, *University of Illinois at Urbana-Champaign*, Teaching Assistant.
-Responsible for conducting the problem solving sessions and grading

Honors and Awards

2013,2014 Appeared in the list of teachers ranked as **Excellent Teacher** by UIUC students.

2006 Awarded **FOE** prize for being top student, by University of Tehran chancellor.

Technical Skills

Programming, *Python, C++, MATLAB*.

Math/Statistics, *R, MySQL*.

Optimization, *SAS/OR, lpsolve, GAMS*.

Selected course work

Fundamental Algorithms
Combinatorial Mathematics
Graphs, Networks and Algorithms

Discrete Event Dynamic Systems
Probability Theory I&II
Multivariate Statistics

Large Scale Optimization
Nonlinear Optimization
Stochastic Simulation

Clustering and Approximation Methods
Graph Theory
Brain, Behavior& Info Processing

Stochastic Processes
Real Analysis
Non-parametric Statistics

Convex Optimization
Control System Theory & Design
Optimization in Finance