

# HADI KARIMI

“OPERATIONS RESEARCH ANALYST”

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## SUMMARY

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Last year PhD student in Industrial Engineering specializing in Operations Research and Analytics. Looking for full time positions (June 2018). Highly motivated to apply my problem-solving and analytical skills to deliver business benefits and actionable insights. Principal areas of interest and experience are mathematical modeling and optimization, data analytics, inventory control & production planning, transportation and logistics engineering.

- +4 years of research experience in developing mathematical optimization models and solution algorithms (prescriptive analytics) for data-driven large-scale decision making problems (modeling: AMPL, GAMS, Julia; solvers: CPLEX, Gurobi, BONMIN, BARON).
- +1.5 year of industry experience working with statistical tools and assisting with strategic and operational decision making.
- Contributed to an average of \$25,000 cost saving recommendations per client as energy auditor at Clemson’s DOE Industrial Assessment Center.
- Selected as Outstanding Graduate Researcher of the year in Clemson IE department (2016).
- President of INFORMS Student Chapter at Clemson and member of *Alpha Pi Mu* honor society.

## RELATED EXPERIENCE

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**Energy Audit Graduate Assistant,** Spring 2017 - present  
*DOE Industrial Assessment Center, Clemson University (CU-IAC)* Clemson, SC

- Managing teams of 5-8 student interns to conduct energy audits at industrial and commercial facilities.
- Working on developing a machine learning framework for industrial energy assessments.

**Graduate Research Assistant** Fall 2014 - Fall 2016  
*Department of Industrial Engineering, Clemson University* Clemson, SC

- Successfully developed a mathematical optimization model and solution methodology to integrate production and transportation planning decisions in the bio-energy supply chains  
\*Received the outstanding researcher award in Clemson IE department; resulting paper featured in the *ISE Magazine*
- Advanced in technical writing, presentation, and research communication skills  
\*4 papers published in peer-reviewed journals; presented research in major professional conferences meetings.
- Gained hands-on experience in working with large-scale databases.  
\*Used SQL scripts, R, and Excel; worked with U.S. Billion Ton database and energy.gov datasets

**Instructor: Industrial Applications of Probability and Statistics (II)** Summer 2016  
*Department of Industrial Engineering, Clemson University* Clemson, SC

- Taught a course on the basics of statistical intuition to address problems in business and industry.

**Industrial Safety Engineer** Fall 2011 - Spring 2013  
*Azerbaijan Steel Company* Tabriz, Iran

- Gained experience in communicating with cross-functional teams, managers, and employees in various levels.

## PATENT APPLICATION

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Karimi, H., and Lonski J. D., “DEVICE FOR TEACHING A DRIVER TO DRIVE IN A FUEL EFFICIENT MANNER.” U.S. Provisional Patent Application NO. 14798989 (filed June 22, 2017).

## EDUCATION

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<b>Ph.D. Candidate in Industrial Engineering</b> Clemson University (GPA:3.7) - Advisor: <i>Dr. Sandra D. Ekşioğlu</i>	Fall 2014 - PRESENT Clemson, SC
<b>M.Sc., Industrial &amp; Systems Engineering</b> Amirkabir University of Technology (GPA: 3.7)	Fall 2009 - Fall 2011 Tehran, Iran
<b>B.Sc., Industrial Engineering</b> Kar Higher Education Institute (GPA: 3.5)	Fall 2004 - Fall 2008 Tehran, Iran

## COMPUTER SKILLS

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<b>Programming Languages</b>	C++; MATLAB Programming; Python
<b>Mathematical Modeling Languages</b>	AMPL; GAMS; Express-MP; Julia; LINGO/LINDO
<b>Data Analysis</b>	MySQL; SAS; R; Minitab; familiarity with Hadoop
<b>Other Software</b>	ArcGIS; Mathematica; OpenLCA; L <sup>A</sup> T <sub>E</sub> X; Inkscape; EndNote

## CERTIFICATES

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<b>Research Computing and Data Insight Boot Camp</b> <i>Clemson Computing &amp; Information Technology Center, Clemson University</i>	2016
<b>Office Automation (Microsoft Access)</b> <i>Technical &amp; Vocational Training Organization, Tehran, Iran</i>	2013

## HONORS & AWARDS

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<b>Outstanding Graduate Researcher of the Year</b> <i>Department of Industrial Engineering, Clemson University</i>	2015
<b>NSF Career Preparedness Grant</b> <i>Supplemental support award for doctoral students supported by an NSF grant, amount: \$6,487</i>	2016
<b>Professional Enrichment Grant</b> <i>Awarded by Graduate Student Government, Clemson University, amount: \$1500 (two times)</i>	2016

## SELECTED PUBLICATIONS

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- Ekşioğlu, S. D., **Karimi, H.**, and Ekşioğlu, B., “Optimization Models to Integrate Production and Transportation Planning for Biomass Co-Firing in Coal-Fired Power Plants.” *IIE Transactions*, 48(10): 901–920, 2016.
- Karimi, H.**, and Seifi, A., “Analytic Center Stabilization of Column Generation Algorithm for the Capacitated Vehicle Routing Problem.” *Optimization Methods and Software*, 30(6): 1109–1125, 2015.
- Ahmadi, T., **Karimi, H.**, Davoudpour, H., and Hosseiniyou, S.A., “A Robust Decision Making Approach for P-hub Median Location Problems Based on Two-Stage Stochastic Programming and Mean-Variance Theory: a Real Case Study.” *The International Journal of Advanced Manufacturing Technology*, 77(9): 1943–1953, 2015.

## GRADUATE COURSEWORK

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Data Analysis; Computation Fundamentals; Statistical Methods; Queuing Systems; Multi-criteria Decision Making; Integer Programming; Advanced Linear Programming; Stochastic Programming and Modeling Under Uncertainty; Systems Analysis; Design of Industrial Systems; Nonlinear Programming; Power Systems Operations and Control; Stochastic Processes and Application; Human Factors Engineering; Discrete Optimization.

## OTHER SKILLS AND ACTIVITIES

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<b>Languages</b>	English (proficient); Persian (native); Azerbaijani (native); Turkish (familiarity)
<b>Interests</b>	Podcasts, Documentaries, Museums, Theaters, Reading, Cooking