

# Mark Nejad

## ACADEMIC POSITION

- 1/2017 - Present    University of Delaware  
*Assistant Professor, Department of Civil & Environmental Engineering*
- 8/2015 - 12/2016    University of Oklahoma  
*Assistant Professor, School of Industrial & Systems Engineering*

## EDUCATION

- 7/2015    Ph.D., Industrial Engineering, Wayne State University  
Dissertation: *Frontiers in Operations Research for Overcoming Barriers to Vehicle Electrification* \*  
**\* IISE Pritsker Doctoral Dissertation Award, 2016**
- 4/2014    M.Sc., Computer Science, Wayne State University  
*Thesis: Truthful Mechanisms for Resource Allocation and Pricing in Clouds*

## PUBLICATIONS AWARDS

- 2017 Runner Up Award for the Best Application Paper from IISE Transactions on Scheduling and Logistics (Vol. 47 and 48)
- 2016 Best PhD Dissertation Award: 1st place of the 2016 Institute of Industrial and Systems Engineers (IISE) Pritsker Doctoral Dissertation Award
- 2015 IBM Research Service Science Best Student Paper Award-Finalist
- 2014 INFORMS ENRE Best Student Paper Award
  - INFORMS: Institute for Operations Research and the Management Sciences
  - ENRE: Energy, Natural Resources, and the Environment Section
- 2014 INFORMS Service Science Best Paper Runner Up Award
- 2014 POMS College of Sustainable Operations Best Student Paper Runner Up Award
  - POMS: Production and Operations Management Society

## PUBLICATIONS (Citations: 549, h-index: 11)

### Published Refereed Journal Papers

- J1. Optimal Routing for Plug-in Hybrid Electric Vehicles \*  
M. Nejad, L. Mashayekhy, D. Grosu, R. Chinnam  
**Transportation Science**, Vol. 51, No. 10, pp. 1304-1325, 2017. (Impact Factor: 4.22)

\* Best Student Paper Award, INFORMS ENRE

\* Best Student Paper Runner Up Award, POMS College of Sustainable Operations

- J2. Online Scheduling and Pricing for Electric Vehicle Charging \*  
M. Nejad, L. Mashayekhy, R. Chinnam, D. Grosu,  
**IIESE Transactions on Scheduling and Logistics**, Vol. 49, No. 2, pp. 178-193, 2017. (Impact Factor: 1.80)
- \* Finalist for IBM Research Service Science Best Student Paper Award, 2015.
- J3. Hierarchical Time-Dependent Shortest Path for Routing on Dynamic Road Networks under Intelligent Transportation Systems \*  
M. Nejad, L. Mashayekhy, R. Chinnam, A. Phillips  
**IIESE Transactions on Scheduling and Logistics**, Vol. 48, No. 2, pp. 158-169, 2016. (Impact Factor: 1.80)
- \* Featured Research Article for the ISE Industrial and Systems Engineer Magazine January 2016 Issue  
\* Runner Up Award for Best Application Paper in Volumes 47 and 48 IIESE Transactions, 2017
- J4. An Online Mechanism for Resource Allocation and Pricing in Clouds  
L. Mashayekhy, M. Nejad, D. Grosu, A. Vasilakos  
**IEEE Transactions on Computers**, Vol. 65, No. 4, pp. 1172-1184, 2016. (Impact Factor: 3.05)
- J5. Truthful Greedy Mechanisms for Dynamic Virtual Machine Provisioning and Allocation in Clouds \*  
M. Nejad, L. Mashayekhy, D. Grosu  
**IEEE Transactions on Parallel and Distributed Systems**, Vol. 26, No. 2, pp. 594-603, 2015. (Impact Factor: 4.18)
- \* Best Paper Runner Up Award - 2014 INFORMS Service Science  
\* Featured in the April-June 2015 Issue of the IEEE Cloud Computing Initiative
- J6. Energy-aware Scheduling of MapReduce Jobs for Big Data Applications  
L. Mashayekhy, M. Nejad, D. Grosu, Q. Zhang, W. Shi  
**IEEE Transactions on Parallel and Distributed Systems**, Vol. 26, No. 10, pp. 2720-2733, 2015. (Impact Factor: 4.18)
- J7. A PTAS Mechanism for Provisioning and Allocation of Heterogeneous Cloud Resources  
L. Mashayekhy, M. Nejad, D. Grosu  
**IEEE Transactions on Parallel and Distributed Systems**, Vol. 26, No. 9, pp. 2386-2399, 2015. (Impact Factor: 4.18)
- J8. Physical Machine Resource Management in Clouds: A Mechanism Design Approach  
L. Mashayekhy, M. Nejad, D. Grosu  
**IEEE Transactions on Cloud Computing**, Special Issue on Economics and Market Mechanisms for Cloud Computing, Vol. 3, No. 3, pp. 247-260, 2015. (Impact Factor: 7.92)
- J9. Cloud Federations in the Sky: Formation Game and Mechanism  
L. Mashayekhy, M. Nejad, D. Grosu  
**IEEE Transactions on Cloud Computing**, Vol. 3, No. 1, pp. 14-27, 2015. (Impact Factor: 7.92)
- J10. Designing Customer-Oriented Catalogs in e-CRM using an Effective Self-adaptive Genetic Algorithm  
I. Mahdavi, M. Nejad, F. Adbesh  
**Expert Systems with Applications**, Vol. 38, No. 1, Elsevier, 2011. (Impact Factor: 3.93)

## Refereed Conference Papers (published in proceedings)

- C1. Multi-Platoon Speed Control for Automated Vehicles  
A. Gharib, B. Chalaki, M. Nejad, A. Malikopoulos  
The 2019 American Control Conference, Philadelphia, USA, July, 2019. (under review)
- C2. A Two-Sided Market Mechanisms for Trading Big Data Computing Commodities  
L. Mashayekhy, M. Nejad, D. Grosu  
Proc. of the 2014 IEEE International Conference on Big Data (IEEE BigData'14), Washington DC, USA, October 2014.
- C3. Energy-aware Scheduling of MapReduce Jobs  
L. Mashayekhy, M. Nejad, D. Grosu, D. Lu, W. Shi  
Proc. of the 3rd IEEE International Congress on Big Data (BigData'14)-Research Track, Anchorage, USA, June 2014. (**Acceptance rate: 18%**)
- C4. Incentive-Compatible Online Mechanisms for Resource Provisioning and Allocation in Clouds  
L. Mashayekhy, M. Nejad, D. Grosu, A. Vasilakos  
Proc. of the 7th IEEE International Conference on Cloud Computing (CLOUD'14)-Research Track, Anchorage, USA, June 2014. (**Acceptance rate: 18%**)
- C5. A Framework for Data Protection in Cloud Federations  
L. Mashayekhy, M. Nejad, D. Grosu  
Proc. of the 43rd International Conference on Parallel Processing (ICPP'14), Minneapolis, USA, September 2014. (**Acceptance rate: 36%**)
- C6. A Truthful Approximation Mechanism for Autonomic Virtual Machine Provisioning and Allocation in Clouds  
L. Mashayekhy, M. Nejad, D. Grosu  
Proc. of the ACM Cloud and Autonomic Computing Conference (CAC'13), pp. 1-10, Miami, USA, August 2013.
- C7. A Family of Greedy Mechanisms for Dynamic Virtual Machine Provisioning and Allocation in Clouds  
M. Nejad, L. Mashayekhy, D. Grosu  
Proc. of the 6th IEEE International Conference on Cloud Computing (CLOUD'13)-Research Track, pp. 188-195, Santa Clara, USA, July 2013. (**Acceptance rate: 18%**)
- C8. Effects of Traffic Network Dynamics on Hierarchical Community-based Representations of Large Road Networks  
M. Nejad, L. Mashayekhy, R. Chinnam  
Proc. of the 15th IEEE International Intelligent Transportation Systems Conference (ITSC'12), pp. 1900-1905, Anchorage, USA, September 2012.
- C9. State Space Reduction in Modeling Traffic Network Dynamics for Dynamic Routing under ITS  
M. Nejad, L. Mashayekhy, A. Taghavi, R. Chinnam  
Proc. of the 14th IEEE International Intelligent Transportation Systems Conference (ITSC'11), pp. 277-282, Washington DC, USA, October 2011.
- C10. Compact Representation of Traffic Network Dynamics Using an Efficient Knowledge Based Discovery Approach  
M. Nejad, L. Mashayekhy, R. Chinnam

Proc. of Industrial Engineering Research Conference, the 61st Institute of Industrial Engineers (IIE) Conference, Reno, USA, May 2011.

### Poster Presentations

- P1. Efficient Routing on Large-Scale Dynamic Networks under ITS Using Hierarchical Communities  
M. Nejad and R. Chinnam  
Intelligent Transportation Society Michigan Annual Meeting & Exposition, Dearborn, MI, June, 2012. **(Best Paper-Gold Award for the Extended Abstract)**
- P2. State-Space Reduction in Modeling Traffic Network Dynamics for Efficient Graph-Based Hierarchical Routing Algorithms under ITS  
M. Nejad and R. Chinnam  
Intelligent Transportation Society Michigan Annual Meeting & Exposition, Dearborn, MI, June, 2011. **(Best Paper-Gold Award for the Extended Abstract)**

### FELLOWSHIPS, AWARDS AND HONORS (not including publication awards)

- Selected to participate in the IIE New Faculty Colloquium, Nashville, TN, 2015.
- Olbrot Travel Award for Excellence in Graduate Student Research, COE, WSU, 2015.
- Nominated for the Midwestern Association of Graduate Schools (MAGS) Distinguished Masters Thesis Award, 2015.
- Selected to attend the 2014 INFORMS Doctoral Student Colloquium.
- Selected to attend the 2014 INFORMS Service Science Doctoral Student Consortium.
- Selected to attend the 2014 POM Supply Chain Management and Sustainable Operations Doctoral Research Roundtable.
- Olbrot Travel Award for Excellence in Graduate Student Research, COE, WSU, 2013.
- Thomas C. Rumble University Graduate Fellowship, COE, WSU, 2013-2014.
- NSF Student Travel Award to attend ACM CAC'13, 2013.
- Outstanding Teaching Assistant Service Award, Engineering Student Faculty Board, WSU, 2013.
- Best Paper-Gold Award, ITS Michigan Annual Meeting, Intelligent Transportation Society, 2012.
- Olbrot Travel Award for Excellence in Graduate Student Research, COE, WSU, 2012.
- Best Presentation Award, ISE Graduate Research Symposium, WSU, 2012.
- Outstanding Teaching Assistant Service Award, Engineering Student Faculty Board, WSU, 2012.
- Best Paper-Gold Award, ITS Michigan Annual Meeting, Intelligent Transportation Society, 2011.
- Outstanding Teaching Assistant Service Award, Engineering Student Faculty Board, WSU, 2011.
- College of Engineering Travel Award, WSU, 2011, 2012, 2013, and 2014.

### TEACHING

- Probability and Statistics for Engineers (CIEG 315), Department of Civil and Environmental Engineering, University of Delaware, Spring 2019.

- Convex Optimization (CIEG 646), Department of Civil and Environmental Engineering, University of Delaware, Fall 2018.
- Network Optimization (CIEG 647), Department of Civil and Environmental Engineering, University of Delaware, Spring 2018.
  - UD Course evaluation: Q1: 3.89, Q2: 4.78, Q3: 4.00, Q4: 4.22, Q461: 4.00
- Applied Operations Research (CIEG 667), Department of Civil and Environmental Engineering, University of Delaware, Fall 2017.
  - UD Course evaluation: Q1: 4.00, Q2: 5.00, Q3: 4.75, Q4: 4.25 , Q461: 4.00
- JANUX Online Course Instructor  
Development of a 16-week high-production online course “Optimization for Analytics” in JANUX, University of Oklahoma, Fall 2016.
- Optimization for Analytics (ISE 5970), School of Industrial and Systems Engineering, University of Oklahoma, Spring 2016.
- Tutorial Instructor (WSU)  
Automotive Operations Research(IE 7570), for Professional Engineering Management Master’s Program (EMMP), Ford Motor Company, Summer 2011, Summer 2013, and Summer 2015.
- Teaching Assistant (WSU)
  - Supply Chain Management(IE 7315), Fall 2012 and Fall 2014.
  - Deterministic Optimization(IE 6560), Fall 2009, Fall 2010, and Fall 2011.
  - Agile Systems for the Manufacturing Enterprise (IE7410), for Professional Engineering Management Master’s Program (EMMP), Ford Motor Company, Fall 2013.
  - Launch through Sustainability: Products and Services (IE8943), Global Executive Track-Ph.D. in Industrial Engineering, Winter 2013 and Fall 2013.
  - Project Management (IE 6840), Winter 2011 and Winter 2012.
  - Lean Operations and Manufacturing (IE 6310), Summer 2014.

## **SERVICE TO PROFESSION**

### **Grant Proposal Review**

- NSF reviewer and panelist 2018

### **Reviewer**

- ASCE Journal of Infrastructure Systems
- ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems Part A: Civil Engineering
- IEEE Transactions on Intelligent Transportation Systems
- IEEE International Conference on Intelligent Transportation Systems
- IEEE/ACM Transactions on Networking
- IISE Transactions on Scheduling and Logistics
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Services Computing
- IEEE Transactions on Cloud Computing

## **Award Committee**

- Reviewer for the 2018 and 2017 Council of University Transportation Centers student awards competitions: Pikarsky Award for best Doctoral dissertation and Master thesis
- Chair of the 2016 INFORMS ENRE Best Student Paper Award; Committee member of the 2015 and 2017 INFORMS ENRE Best Student Paper Award