

# Yasaman Ghasem Pour

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## EDUCATION

### Rice University, Houston, TX, USA

- Ph.D. Candidate, Electrical and Computer Engineering (*Expected: May 2019*)  
Advisor: Edward W. Knightly
- M.S., Electrical and Computer Engineering, May 2016.  
*GPA: 4.04/4.0*  
Thesis: Scaling 60 GHz WLANs: Creating and Identifying Opportunities for Multi-User Transmission  
Committee: Edward W. Knightly (*Chair*), Behnaam Aazhang, Aydin Babakhani

### Sharif University of Technology, Tehran, Iran

- B.Sc., Electrical Engineering, May 2014  
*GPA: 3.83/4.0*

## SKILLS

- **Specialized Software:** MATLAB, NS3, Simulink, LabVIEW, OPNET, ModelSim, Orcad, PSpice, HSpice, Proteus, Quartus, Code Vision AVR, Altium Designer, Microsoft Visual Studio
- **Programming Languages:** MATLAB, C++, C, Assembly, HTML, L<sup>A</sup>T<sub>E</sub>X
- **Hardware:** WARP platform, Verilog, PCB design, DSP
- **Languages:** Persian: Native, English: Fluent

## PROFESSIONAL EXPERIENCE

- **Rice University, Houston, Texas, USA** networks.rice.edu  
*Research Assistant, Rice Networks Group* *December 2014- present*
  - Robust 60 GHz Indoor Connectivity with Cooperative Access Points: 60 GHz links are susceptible to failure due to slight translational or rotational mobility. We Provide seamless high data rate connectivity for mobile users via multiple cooperate transmission points
  - Enabling MU-MIMO for 60 GHz WLANs: Design and evaluate scalable and low-overhead user and beam selection protocol to enable multi-user transmission using low cost antenna arrays in 60 GHz WLANs.
  - mmTrace: Modeling Millimeter-wave Indoor Propagation with Image-based Ray-tracing: Design and evaluation novel techniques to model propagation characteristics of mmWave in indoor environments (*In collaboration with TU Darmstadt university in Germany*).
- **NEC Labs America, Princeton, New Jersey, USA** nec-labs.com  
*Research Intern* *Summer 2016*
  - Managing millimeter-wave Cellular Networks: An efficient joint user selection and beamforming algorithm to maximize the weighted sum-rate of users in mmWave cellular networks
- **IRAN Telecommunication Research Center, Tehran, IRAN** itrc.ac.ir  
*Technical Intern* *Summer 2013*
  - CSMA based MAC Protocols for Wireless Sensor Networks: Performance evaluation of different MAC protocols for Wireless Sensor Networks in terms of energy consumption, efficiency and delay.

## HONORS & AWARDS

- **Texas Instruments Distinguished Fellowship** *August 2014- present*
- **N2Women Travel Grant** *October 2016*
- **MobiCom 2016 Travel Grant** *August 2016*
- **Rice Electrical and Computer Engineering Fellowship** *August 2014- May 2015*

- **Society of Iranian-American Women for Education Fellowship** *March 2015 and 2017*
- Member of **National Elites Foundation of Iran** *2010-2014*
- **Exempted from M.Sc. Entrance Exam** in Iran as an exceptionally talented undergraduate student(I declined the offer) *March 2014*
- **Ranked 7th** in the Nationwide University Entrance Exam for engineering in Iran (batch size 320,000) *June 2010*
- **Ranked 13th** in the Nationwide University Entrance Exam for linguistics in Iran (batch size 11,000) *June 2010*
- **Ranked 1st** in the Nationwide Islamic Azad University Entrance Exam in Iran (batch size 100,000) *June 2010*
- **Semifinalist**, National Mathematics Olympiad *March 2008*

## PUBLICATIONS

- **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Novel Combinational Results on Downlink MU-MIMO Scheduling with applications,” in Proceedings of IEEE WONS 2017, Jackson Hole, Wyoming, USA.
- **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Link Packing in mmWave Networks,” in Proceedings of IEEE ICC 2017, Paris, France.
- **Y. Ghasempour**, E. Knightly, “Decoupling Beam Steering and User Selection for Scaling Multi-User 60 GHz WLANs,” submitted to ACM MobiHoc 2017.
- **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Managing Analog Beams in mmWave Networks,” submitted to IEEE ISIT 2017.
- **Y. Ghasempour**, “Scaling 60 GHz WLANs: Creating and Identifying opportunities for Multi-User Transmission”, Master’s Thesis, May 2016.

## PATENTS

- “Joint Beamforming and User Grouping for mmWave Cellular Networks”, provisional patent filed in August 2016.

## PROJECTS

- **Managing mmWave Cellular Networks**, under supervision of Dr.Prasad and Dr.Khojastepour *May 2016- present*
- **Maximizing Sum Rate in 60 GHZ Downlink MU-MIMO**, M.Sc. Thesis, under supervision of Prof. Knightly *April 2015- present*
- **Performance Analysis of Fixed Node Assisted Routing for Ad Hoc Networks**, under supervision of Prof. Johnson *September 2015-December 2015*
- **Robust 60 GHz Indoor Connectivity with Cooperative Access Points**, under supervision of Prof. Knightly *Spring 2015*
- **Effect of Exponential Back off on the Performance of Network Coding in a Slotted Aloha Network**, B.Sc. Thesis, under the supervision of Prof. Ashtiani *Fall 2014*
- **Comparison of CSMA based MAC Protocols of Wireless Sensors**, part of the internship project *Summer 2013*
- **Design and Implementation of controller of gain amplifier with AVR**, under the supervision of Prof. Movahedian *Spring 2012*

## PROFESSIONAL ACTIVITIES

- **Co-Chair of ACM S<sup>3</sup> 2016**, held in conjunction with ACM MobiCom 2016 in New York.
- **Poster:**
  - Y. Ghasem Pour and E. Knightly, “**Spatial Multiplexing in Millimeter-Wave Networks**,” Keck Seminar, Brown University, October 2016.
  - Y. Ghasem Pour and E. Knightly, “**Maximizing Spatial Streams in THZ band**,” Keck Seminar, Rice University, November 2015.
  - Y. Ghasem Pour et al., “**Next Generation Millimeter-Wave Wireless Communications: Achieving Multi-Gigabit Data Rates**,” Rice ECE, Affiliates Conference, Rice University, March 2015.

- **Reviewer:**

- IEEE Dynamic Spectrum Access Networks (DySPAN) 2017
- IEEE Wireless On-demand Network systems and Services (WONS) 2017
- IEEE International Conference on Sensing, Computing, and Networking (SECON) 2015.
- IEEE Transactions on Wireless Communications.

**TEACHING  
EXPERIENCE**

- ELEC 437: Intro to Communication Network *Fall 2016*
- ELEC 243: Electronic Measurement Systems *Spring 2016*
- ELEC 533: Intro to Random Processes *Fall 2015*

**LEADERSHIP**

- Co-Chair of ACM S<sup>3</sup> Workshop in conjunction with MobiCom 2016, New York, USA.
- Vice president of Rice Iranian Society *October 2014- October 2015*
- Member of Women's Leadership Group in Electrical and Computer Engineering at Rice University *August 2014- present*
- Scientific Assistant Director of the 11th annual conference of Sharif University *January 2013*