

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:** 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^AT_EX
- **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*
 - Scaling 60 GHz WLANs with Multi-User Transmissions: Design and evaluation of scalable and low-overhead user and beam selection strategies to enable multi-user transmission using low cost antenna arrays in 60 GHz WLANs.
 - Decoupling Beam Steering and User Selection: Design and Evaluation of a low-complexity framework for decoupling analog beamforming and user selection in MU-MIMO 60 GHz WLANs.
 - 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.
- **NEC Labs America, Princeton, New Jersey, USA** nec-labs.com
Research Intern *Summer 2016*
 - Novel Combinational Results on Downlink MU-MIMO Scheduling: We showed that the classical problem of downlink multi-use MIMO scheduling with linear transmit precoding can be cast as difference of two sub-modular functions and hence can be efficiently maximized.
 - Managing Analog Beams in mmWave Networks: We Achieved bounds on the maximize number of beams that can be packed in the network. We also optimized the set of beams and the users associated with each transmission point.

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**, C. Cordeiro, C. DaSilva, E. Knightly, “IEEE 802.11ay: Directional 60 GHz MIMO Communication for Enhanced Multi-Gbps Wi-Fi,” in preparation, to be submitted to IEEE Communications Magazine.
- **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Managing Analog Beams in mmWave Networks,” submitted to IEEE ISIT 2017.
- **Y. Ghasempour**, E. Knightly, “Decoupling Beam Steering and User Selection for Scaling Multi-User 60 GHz WLANs,” in Proceeding of ACM MobiHoc 2017.
- **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Link Packing in mmWave Networks,” in Proceedings of IEEE ICC 2017, Paris, France.
- **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**, “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.

SELECTED COURSE PROJECTS

- **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 in IRAN Telecommunication Research Center *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 S³ 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 Transactions on Wireless Communications.

- 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.

**TEACHING
EXPERIENCE**

- ELEC 437: Into 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 S³ 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*