

YASAMAN GHASEMPOUR

GENERAL

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EDUCATION

Ph.D. Candidate, Rice University

May 2016 - Present

Electrical and Computer Engineering

GPA: 4.17/4.0

Advisor: Edward W. Knightly

M.S., Rice University

Aug. 2014 - May 2016

Electrical and Computer Engineering

GPA: 4.03/4.0

Thesis: Scaling 60 GHz WLANs: Creating and Identifying Opportunities for Multi-User Transmission

Committee: Edward W. Knightly (*Chair*), Behnaam Aazhang, Aydin Babakhani

B.Sc., Sharif University of Technology

Aug. 2010 - May 2014

Electrical Engineering

GPA: 3.83/4.0

RESEARCH INTERESTS

Wireless Communication and Sensing, Millimeter-Wave Networks, 5G, Autonomous Systems, Wireless Security

HONORS & AWARDS

- Recipient of N2Women Young Researcher Fellowship, 2018
- Recognized as Star Doctoral Student, ECE department, Rice University, 2018
- Finalist for Best Paper Award at ACM WiNTECH, 2017
- Recipient of ACM SIGMOBILE Travel Grant, 2016, 2017, 2018
- Recipient of Society of Iranian-American Women for Education Fellowship, 2015 and 2017
- Recipient of Texas Instruments Distinguished Fellowship, 2014
- Recipient of Rice Electrical and Computer Engineering Fellowship, 2014
- Recognized as Exceptionally Talented Undergraduate Student, Sharif University of Technology, 2014
- Member of National Elites Foundation of Iran, 2010- present
- Ranked 7th among 320,000 participants of Iranian Nationwide Annual University Entrance Exam, 2010
- Dean's Honorary Award by President of Sharif University of Technology, 2010
- Semifinalist, National Mathematics Olympiad, 2008

PUBLICATIONS

- [1] **Y. Ghasempour**, M.K. Haider, E. Knightly, “Decoupling Beam Steering and User Selection for MU-MIMO 60 GHz WLANs,” *IEEE/ACM Transactions on Networking*, 2018.
- [2] S.K. Saha, **Y. Ghasempour**, M.K. Haider, T. Siddiqui, P. De Melo, N. Somanchi, L. Zakrajsek, A. Singh, O. Torres, D. Uvaydov, J.M. Jornet, “X60: A Programmable Testbed for Wideband 60 GHz WLANs with Phased Arrays,” *Computer Communications*, 2018.
- [3] **Y. Ghasempour**, C. Cordeiro, C. DaSilva, E. Knightly, “IEEE 802.11ay: Next-Generation 60 GHz Communication for 100 Gb/s Wi-Fi,” *IEEE Communications Magazine*, 2017.
- [4] **Y. Ghasempour**, M.K. Haider, C. Cordeiro, D. Koutsonikolas, E. Knightly, “Multi-Stream Beam-Training for mmWave MIMO Networks,” in *Proceedings of ACM MobiCom*, 2018.
- [5] M.K. Haider, **Y. Ghasempour**, D. Koutsonikolas, E. Knightly, “LiSteer: mmWave Beam Acquisition and Steering by Tracking Indicator LEDs on Wireless APs,” in *Proceedings of ACM MobiCom*, 2018.
- [6] M.K. Haider, **Y. Ghasempour**, E. Knightly, “SearchLight: Tracking Device Mobility using Indoor Luminaries to Adapt 60 GHz Beams,” in *Proceedings of ACM MobiHoc*, 2018.
- [7] **Y. Ghasempour**, E. Knightly, “Decoupling Beam Steering and User Selection for Scaling Multi-User 60 GHz WLANs,” in *Proceedings of ACM MobiHoc*, 2017.
- [8] S.K. Saha*, **Y. Ghasempour***, M.K. Haider*, T. Siddiqui, P. De Melo, N. Somanchi, L. Zakrajsek, A. Singh, O. Torres, D. Uvaydov, J.M. Jornet, “X60: A Programmable Testbed for Wideband 60 GHz WLANs with Phased Arrays,” in *Proceedings of ACM WiNTECH*, 2017. **Second Place, Best Paper Award.**
- [9] **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Managing Analog Beams in mmWave Networks,” in *Proceedings of Asilomar Conference on Signals, Systems and Computers*, 2017.
- [10] **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Link Packing in mmWave Networks,” in *Proceedings of IEEE ICC*, 2017.
- [11] **Y. Ghasempour**, N. Prasad, M. Khojastepour, S. Rangarajan, “Novel Combinational Results on Downlink MU-MIMO Scheduling with applications,” in *Proceedings of IEEE WONS*, 2017.
- [12] **Y. Ghasempour**, “Scaling 60 GHz WLANs: Creating and Identifying opportunities for Multi-User Transmission”, Master’s Thesis, May 2016.

* Primary co-authors

PATENTS

- “Link Packing in mmWave Networks”, US Patent App. 15/678,681.
- “Managing Analog Beams in mmWave Networks”, US Patent App. 15/676,517.

LEADERSHIP

- Organizer of the N2 Women event at ACM MobiHoc, 2018
- Member of Dean of Engineering’ Student Advisory Council 2017 - present
- Member of Women’s Leadership Group in Electrical and Computer Engineering, Rice University 2014 - present
- Co-Chair of ACM S³ Workshop in conjunction with MobiCom 2016
- Vice president of Rice Iranian Society 2014 - 2016
- Assistant director of the 11th annual conference of electrical engineering at Sharif University 2013

INVITED TALKS

- [1] Millimeter Networks (mmNets) Workshop, Snowbird, UT., October, 2017
“Multi-User 60 GHz WLANs: from Standards to User Selection Policies”
- [2] NSF RCN Workshop, New York City, NY., July, 2018
“Multi-Stream Beam Training for mmWave MIMO Systems”
- [3] ECE Affiliates Conference, Rice University, March, 2018
“mmWave Beam Acquisition and Steering with Practical Phased Array Antennas”
- [4] ACM MobiCom, Snowbird, UT., October 2017
“X60: A Programmable Testbed for Wideband 60 GHz WLANs with Phased Arrays”
- [5] Keck Seminar, Brown University, October, 2016
“Spatial Multiplexing in Millimeter-Wave Networks”
- [6] Keck Seminar, Rice University, November, 2015
“Maximizing Spatial Streams in THz band”
- [7] ECE Affiliates Conference, Rice University, March, 2015
“Next Generation Millimeter-Wave Wireless Communications: Achieving Multi-Gigabit Data Rates”

PROFESSIONAL ACTIVITIES

- Member of Technical Program Committee for ACM S³, 2016 and 2018.
- **Reviewer for:**
 - IEEE Transactions on Communications
 - IEEE Transactions on Wireless Communications
 - IEEE Wireless Communication Letters
 - Proceedings of IEEE
 - Elsevier Computer Networks
 - IEEE Wireless Communications and Networking Conference
 - IEEE Wireless On-demand Network systems and Services
 - IEEE Dynamic Spectrum Access Networks
 - IEEE International Conference on Sensing, Computing, and Networking
 - IEEE Millimeter-Wave Networked System (mmSys) Workshop

RESEARCH EXPERIENCE

Research Assistant, Rice University Aug. 2014 - Present
Under Supervision of Prof. Edward Knightly
Research Areas:

- Scaling Wi-Fi to High Data Rate and High Client Density
- Efficient Beam Steering in mmWave Systems
- Enabling Multi-Stream Transmissions for Next-Gen Wireless Technology: User and Beam Selection
- Experimental Evaluations in mmWave and Terahertz Bands
- Unmanned Aerial Vehicles: Autonomous Sensing and Communication
- Light Sensing

Research Intern, NEC Labs America May 2016 - Aug. 2016
Under Supervision of Dr. Prasad and Dr. Khojastepour
Research Areas:

- Downlink MU-MIMO Scheduling
- Managing Analog Beams in mmWave Cellular Networks
- Link Packing in mmWave Cellular Networks

SKILLS

Specialized Software:	NS3, Simulink, LabVIEW, OPNET, ModelSim, Code Vision AVR
Programming Languages:	Python, C++, C, Java, MATLAB, Assembly, HTML, L ^A T _E X
Hardware:	WARP platform, Verilog, PCB design, DSP
Languages:	English, Persian

SELECTED TEACHING EXPERIENCES

Guest Lecturer:

- Intro to Communication Networks (ELEC 537) Rice University, Fall 2017
- Intro to Communication Networks (ELEC 537) Rice University, Fall 2016
- Intro to Random Processes (ELEC 533) Rice University, Fall 2015

Teaching Assistant:

- High Performance Computer Architecture Spring 2018
- Intro to Communication Networks Fall 2016 and Fall 2017
- Electronic Measurement Systems Spring 2016 and Spring 2017
- Intro to Random Processes Fall 2015
- Communication Systems Fall 2013
- Computer and Microprocessor Architecture Fall 2013
- Electronic Principles Fall 2013
- Analog Circuits Spring 2013
- Logic Circuits Spring 2013

REFERENCES

Prof. Edward Knightly
 Professor and Department Chair
 Electrical and Computer Engineering
 Rice University
 knightly@rice.edu

Prof. Dimitrios Koutsonikolas
 Associate Professor
 Computer Science and Engineering
 University at Buffalo, SUNY
 dimitro@buffalo.edu

Dr. Carlos Cordeiro
 Senior Principal Engineer and Senior Director
 Intel Corporation
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Prof. Ashutosh Sabharwal
 Professor
 Electrical and Computer Engineering
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