

Yasaman Keshtkarjahromi

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Google scholar: <https://scholar.google.com/citations?hl=en&user=ksKMvX4AAAAJ>

Work Authorization Status: U.S. Permanent Resident

Education

University of Illinois at Chicago

Ph.D. in Electrical and Computer Engineering, May 2017

GPA: 4.0/4.0

University of Tehran, Iran

M.S. in Electrical and Computer Engineering, Sep. 2010

Shiraz University, Iran

B.S. in Electrical and Computer Engineering, Sep. 2007

Research Interest

- Security & Privacy
- Distributed Edge Computing for IoT
- Machine Learning

Work Experience

Senior Research Engineer at “Seagate Technology” (February 2019 – present)

Seagate Research Group, Shakopee, MN

Postdoctoral Research Fellow at “Army Research Lab” (August 2018 – January 2019)

Computational and Information Sciences (CISD) Department, Adelphi, MD

Postdoctoral Research Fellow at “Networking Research Lab” (May 2017 – July 2018)

University of Illinois at Chicago, Chicago, IL

Research Assistant at “Networking Research Lab” (Jan. 2014 – May 2017)

University of Illinois at Chicago, Chicago, IL

Research Intern at “Huawei R&D” (July 2016 – Sep. 2016)

Wireless Lab, Rolling Meadows, IL

Research Intern at “Bell Labs - Nokia” (June 2015 – Aug. 2015)

The Mathematics and Algorithms Research Group, Murray Hill, NJ

Research Assistant at “Multimedia Communications Lab” (Jan. 2011 – Dec. 2013)

University of Illinois at Chicago, Chicago, IL

Research Assistant at “Wireless Communication Center” (Sep. 2008 – Sep. 2010)

University of Tehran, Tehran, Iran

Publications

Journal Papers

1. Yasaman **Keshtkarjahromi**, Yuxuan Xing and Hulya Seferoglu, "Adaptive and Heterogeneity-Aware Coded Cooperative Computation at the Edge," in *IEEE Transactions on Mobile Computing*, 2021.
2. Rawad Bitar, Yuxuan Xing, **Yasaman Keshtkarjahromi**, Venkat Dasari, Salim El Rouayheb, and Hulya Seferoglu, "Private and Rateless Adaptive Coded Matrix-Vector Multiplication," in *EURASIP Journal on Wireless Communications and Networking*, Jan. 2021.
3. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rashid Ansari, Ashfaq Khokhar, "D2D Networking Meets Cellular via Network Coding," in *IEEE/ACM Transactions on Networking*, vol. 26, no. 1, pp. 370-383, Feb. 2018.
4. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rashid Ansari, Ashfaq Khokhar, "Content-Aware Network Coding over Device-to-Device Networks," in *IEEE Transactions on Mobile Computing*, vol. 16, no. 8, pp. 2147-2158, Aug. 2017.

Conference Papers

1. Elahe Vedadi, **Yasaman Keshtkarjahromi**, Hulya Seferoglu, "Adaptive Gap Entangled Polynomial Coding for Multi-Party Computation at the Edge," in *IEEE ISIT*, Espoo, Finland, June 2022.
2. Elahe Vedadi, **Yasaman Keshtkarjahromi**, Hulya Seferoglu, "PolyDot Coded Privacy Preserving Multi-Party Computation at the Edge," in *IEEE SPAWC*, Oulu, Finland, July 2022.
3. Elahe Vedadi, **Yasaman Keshtkarjahromi**, Hulya Seferoglu, "Coded Privacy-Preserving Computation at Edge Networks," in *ICML 2021 Workshop on Information Theoretic Methods for Rigorous, Responsible, and Reliable Machine Learning*, July 2021.
4. Usama Muneeb, Erdem Koyuncu, **Yasaman Keshtkarjahromi**, Hulya Seferoglu, M. Fatih Erden, A. Enis Cetin, "Robust and Computationally-Efficient Anomaly Detection Using Powers-Of-Two Networks," in *IEEE ICASSP*, Barcelona, Spain, May 2020.
5. **Yasaman Keshtkarjahromi**, Rawad Bitar, Venkat Dasari, Salim El Rouayheb, Hulya Seferoglu, "Secure Coded Cooperative Computation at the Heterogeneous Edge against Byzantine Attacks" in *IEEE Globecom*, Waikoloa, HI, Dec. 2019.
6. Rawad Bitar, Yuxuan Xing, **Yasaman Keshtkarjahromi**, Venkat Dasari, Salim El Rouayheb, and Hulya Seferoglu, "PRAC: Private and Rateless Adaptive Coded Computation at the Edge," in *SPIE Defense + Commercial Sensing*, Baltimore, MD, Apr. 2019.
7. **Yasaman Keshtkarjahromi**, Yuxuan Xing, Hulya Seferoglu, "Dynamic Heterogeneity-Aware Coded Cooperative Computation at the Edge," in *IEEE ICNP*, Cambridge, UK, Sep. 2018. (acceptance rate: 17%)
8. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rashid Ansari, Ashfaq Khokhar, "D2D Meets Cellular Using Network Coding," in *ACM CoNext Student Workshop*, Irvine, CA, Dec. 2016.
9. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rashid Ansari, Ashfaq Khokhar, "Network Coding for Cooperative Mobile Devices with Multiple Interfaces", in *Proc. of IEEE Milcom*, Tampa, FL, Oct. 2015.
10. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rashid Ansari, Ashfaq Khokhar, "Content-Aware Instantly Decodable Network Coding over Wireless Networks," in *Proc. of IEEE International Conference on Computing, Networking and Communications (ICNC)*, Anaheim, CA, Feb. 2015.
11. **Yasaman Keshtkarjahromi**, Mehrdad Valipour, Farshad Lahouti, "Multi-Level Distributed Arithmetic Coding with Nested Lattice Quantization," in *Proc. of IEEE Data Compression Conference (DCC)*, Snowbird, UT, Mar. 2014.
12. **Yasaman Keshtkarjahromi**, Rashid Ansari, Ashfaq Khokhar, "Energy Efficient Decentralized Detection Based on Bit-optimal Multi-hop Transmission in One-dimensional Wireless Sensor Network," in *Proc. of IEEE Wireless Days (WD)*, Valencia, Spain, Nov. 2013.
13. Daniella Tuninetti, Natasha Devroye, **Yasaman Keshtkarjahromi** "On Cognitive Channels with an Oblivion Constraint," in *Proc. of IEEE International ICST Conference on Cognitive Radio Oriented Wireless Networks and Communications (CROWNCOM)*, Osaka, Japan, June 2011.

Patents

1. **Yasaman Keshtkarjahromi**, Riyan Alex Mendonsa, “Cartridge Data Storage with Information-theoretic Security,” US Patent App. 17/077,875.
2. **Yasaman Keshtkarjahromi**, “Method and System that Determine Malicious Nodes in a Distributed Computation Network,” US Patent App. 17/069,077.
3. **Yasaman Keshtkarjahromi**, “Distributed Secure Edge Heterogeneous Storage Network with Byzantine Attack Resilience,” US Patent No. 11423164, 23 Aug. 2022.
4. **Yasaman Keshtkarjahromi**, “Distributed Secure Edge Heterogeneous Storage Network with Redundant Storage and Byzantine Attack Resilience,” US Patent No. 11405420, 2 Aug. 2022.
5. **Yasaman Keshtkarjahromi**, Mehmet Fatih Erden, “Distributed Secure Edge Storage Network Utilizing Cost Function to Allocate Heterogeneous Storage,” US Patent No. 11,308,040. 19 Apr. 2022.
6. **Yasaman Keshtkarjahromi**, Mehmet Fatih Erden, “Distributed Secure Edge Storage Network Utilizing Redundant Heterogeneous Storage,” US Patent No. 11,308,041. 19 Apr. 2022.

Posters

1. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rawad Bitar, Yuxuan Xing, Venkat Dasari, Salim El Rouayheb, “Secure Coded Cooperative Computation at the Heterogeneous Edge,” Poster Presentation in *iDASH Privacy & Security Workshop*, Bloomington, IN, Oct. 2019.
2. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rashid Ansari, Ashfaq Khokhar, “D2D Meets Cellular Using Network Coding,” Poster Presentation in *ACM CoNext Student Workshop*, Irvine, CA, Dec. 2016.
3. **Yasaman Keshtkarjahromi**, Hulya Seferoglu, Rashid Ansari, Ashfaq Khokhar, “Content-Aware Instantly Decodable Network Coding over Wireless Networks,” Poster Presentation in *N2Women Workshop of ACM SIGCOMM Conference*, Chicago, IL, Aug. 2014. (**Received the best poster award**)

Awards and Honors

- N2Women Young Researcher Fellowship (2018)
- Travel Grant from the US National Science Foundation (NSF) (ICNP 2018)
- Postdoctoral Fellowship Award in the U.S. Army Research Laboratory (ARL) / Research Associateship Program (RAP) (Adelphi, MD, 2018)
- Provost Award for Graduate Research (University of Illinois at Chicago, 2016)
- Best Poster Award in N2Women Workshop, SIGCOMM Conference (Chicago, IL, 2014)
- Student Travel Grant (CoNext 2016, Milcom 2015, ICNP 2014)
- Student Travel Presenter's Award, DCC Conference (Snowbird, UT, 2014)
- Member of National Organization for Development of Exceptional Talents (NODET) (Iran, 1999 –2003)

Advising Experience

1. Usama Muneeb: Intern at Seagate Technology, Summer 2019
2. Elahe Vedadi: Intern at Seagate Technology, Summer 2021, Summer 2022

Invited Talks

1. “Dynamic Heterogeneity-Aware Coded Cooperative Computation at the Edge,” Seagate Technology, Shakopee, MN, Oct. 2018.
2. “D2D Networking Meets Cellular via Network Coding,” Huawei R&D, Rolling Meadows, IL, July 2016.
3. “Quality Improvement in Instantly Decodable Network Coding,” CRAB Workshop of IEEE ICNP Conference, Raleigh, NC, Oct. 2014

Professional Activities

Organizing:

- Registration Chair for IEEE ICNP 2020, Madrid, Spain, Oct. 2020
- Registration Chair for IEEE ICNP 2019, Chicago, IL, Oct. 2019
- N2Women Event at IEEE ICNP 2018, Cambridge, UK, Sep. 2018

Technical Program Committee Member:

- Wireless Telecommunication Symposium (WTS), 2017.

Reviewer for Conferences / Journals:

- **Conferences:** ISIT 2021, ISIT 2020, ICC 2019, WCNC 2017, WTS 2017, PIMRC 2015, ICC 2015, N2Women 2014, ICC 2013.
- **Journals:** IEEE Wireless Communications Letters, IEEE Communications Letters, IEEE/ACM Transactions on Networking, IEEE Transactions on Information Theory, IEEE Transactions on Mobile Computing, IEEE Transactions on Communications, IEEE Transactions on Wireless Communications, IEEE Transactions on Services Computing, IEEE Transactions on Vehicular Technology, IEEE Transactions on Emerging Topics in Computational Intelligence, Transactions on Emerging Telecommunications Technologies, Ad Hoc Networks, International Journal of Electronics and Communications, Elsevier Computer Networks Journal.

Membership:

- IEEE, ACM, N2Women, WISE

Outreach:

- Panelist in N2Women Meeting at IEEE ICNP 2019, Oct. 2019.

Volunteer Work

- Volunteer Judge at Minnesota State Science Fair 2020, 2021
- Volunteer Judge at Minnesota Middle School Science Bowl 2020
- Volunteer Judge at Minnesota High School Science Bowl 2020
- Volunteer at Expanding Your Horizons (EYH) 2015, Chicago, IL
- Volunteer at IEEE Explore the Future Symposium 2014, Chicago, IL
- Volunteer Judge for Future City Competition 2014, Chicago, IL