

Mohammadali Khodabandehlou

Ph.D. Student, Ming Hsieh Department of Electrical and Computer Engineering
University of Southern California, Los Angeles, CA, USA

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EDUCATION

- **Doctor of Philosophy in Computer Engineering** Aug. 2024 - Present
University of Southern California
Advisor: Prof. Bhaskar Krishnamachari
Los Angeles, United States
- **Bachelor of Science in Computer Engineering** Sep. 2019 - Jun. 2024
Sharif University of Technology
Tehran, Iran

RESEARCH INTERESTS

My research is in computer networks and distributed systems, with a focus on designing efficient, scalable, and intelligent solutions for complex, real-world problems. I am also interested in systems for AI and LLMs.

PUBLICATIONS




C = CONFERENCE, J = JOURNAL

- [J.1] **DPM-RPL: Routing-Based Distributed Dynamic Power Management for NVP IoT Networks**
Bardia Safaei, **Mohammadali Khodabandehlou**.
IEEE Transactions on Green Communications and Networking, 2026.
- [C.1] **Adapting Classic Scheduling Heuristics for Online Execution under Uncertainty**
Jason Chamorro, Gabriel Twigg-Ho, Jared Coleman, Tainã Coleman, Bhaskar Krishnamachari, **Mohammadali Khodabandehlou**.
SC '25.
- [C.2] **Studying the Effect of Schedule Preemption on Dynamic Workflow Scheduling**
Mohammadali Khodabandehlou, Jared Coleman, Niranjani Suri, Bhaskar Krishnamachari.
MILCOM '25.
- [C.3] **Poster Abstract: Scheduling Dynamic IoT Task Graphs**
Mohammadali Khodabandehlou, Jared Coleman, Bhaskar Krishnamachari.
SenSys '25.

HONORS AND AWARDS

- **ICPP '25 NSF Travel Grant** Aug. 2025
International Conference on Parallel Processing
- **4Y Annenberg Graduate Student Fellowship** Feb. 2024
University of Southern California
- **University Entrance Exam Top Ranked** Jun. 2019
Ranked 78th in Iranian University Entrance Exam among more than 160,000 students

RESEARCH EXPERIENCE

- **ANRG**  Aug. 2024 - Present
Graduate Research Assistant
University of Southern California
◦ Research on dynamic task-graph scheduling for distributed and mission-critical IoT workflows.
- **RADIAN**  Jan. 2023 - May 2024
Undergraduate Research Assistant
Sharif University of Technology
◦ Designed and implemented DPM-RPL, a new objective function for the RPL routing protocol, improving energy efficiency by up to 60% while maintaining reliability in IoT networks.
- **HPCAN**  Aug. 2023 - Apr. 2024
Undergraduate Research Assistant
Sharif University of Technology
◦ Contributed to TOWER, a turn-free Network-on-Chip architecture focused on enhancing power efficiency and reducing packet latency.

TALKS AND POSTERS

- **MILCOM '25** Sep. 2025
Studying the Effect of Schedule Preemption on Dynamic Task Graph Scheduling Los Angeles, United States
- **ICPP '25 Student Forum** Sep. 2025
A Flexible DAG Runtime with Open Scheduling and Transport Flexibility San Diego, United States
- **SenSys '25 Poster Session** May 2025
Scheduling Dynamic IoT Task Graphs Irvine, United States

TEACHING ASSISTANT

- **Assisted in teaching, grading, and providing materials** Sep. 2022 – Feb. 2024
Courses: Sharif University of Technology
 - **Computer Simulation, Operating Systems, Digital Systems Design, Game Theory, Software Engineering, Data Structures and Algorithms, and Linear Algebra.**

PROFESSIONAL SERVICE

- **Shadow TPC Member** 2026
ACM Internet Measurement Conference (IMC '26)

COURSEWORK

- **Systems for LLMs** Fall '25
Instructor: Seo Jin Park USC
- **Analysis of Algorithms** Fall '25
Instructor: Shahriar Shamsian USC
- **Wireless Networks** Spring '25
Instructor: Bhaskar Krishnamachari USC
- **Machine Learning** Spring '25
Instructor: Haipeng Luo USC
- **Advanced Computer Networks** Fall '24
Instructor: John Heidemann USC

WORK EXPERIENCE

- **Software Engineer** Apr. 2022 - Jul. 2024
RADIS Tehran, Iran
- **Android Developer** Jul. 2021 - Mar. 2022
RADIS Tehran, Iran

SKILLS

- **Programming Languages:** C, C++, Cuda, Java, Python, Dart
- **Frameworks:** Spring Boot, Flutter, Android
- **Database Systems:** Oracle, Redis
- **DevOps & Version Control:** K8s, K3s, Docker, Swarm, MicroK8s, Git
- **Mathematical & Statistical Tools:** R, MATLAB, Python
- **Other Tools & Technologies:** QEMU, LLVM, \LaTeX

VOLUNTEER EXPERIENCE

- **Sharif HardWar [🌐]** May 2023 – Jun. 2023
Sharif University of Technology
 - Co-Director
- **8th Winter Seminar Series (WSS) [🌐]** Jan. 2023 – Apr. 2023
Sharif University of Technology
 - Head of sponsorship team
- **ICPC 2019 [🌐]** Dec. 2019
Sharif University of Technology
 - Executive Staff

ADDITIONAL INFORMATION

Languages: English (TOEFL iBT: 111), Persian (native)