Mohammad Goudarzi (Assistant Professor)

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RESEARCH INTERESTS

Distributed Systems, Cloud/Fog/Edge Computing, Internet of Things (IoT), Machine Learning

EDUCATION

University of Melbourne, Australia   Jul 2018 - Jun 2022
PhD in Engineering (Specialization in Distributed Systems and Algorithms & Operating Systems)

Iran University of Science and Technology (IUST), Tehran, Iran   Sep 2013 - Sep 2015
Master of Information Technology (Specialization in Computer Networks)   GPA: 4/4

WORK EXPERIENCE

Monash University - Faculty of Information Technology   Jul 2024 - Now
Assistant Professor   Melbourne, Australia

The University of New South Wales (UNSW) - School of Computer Science and Engineering   Jan 2023 - Jul 2024
Senior Research Associate (UNSW & Cisco IoT Project)   Sydney, Australia

Monash University - Faculty of Information Technology   Sep 2022 - Dec 2022
Research Assistant   Melbourne, Australia

The University of Melbourne - School of Computing and Information Systems   Jul 2022 - Sep 2022
Research Assistant   Melbourne, Australia

Ammmoj Company   Sep 2015 - May 2018
Project Manager   Tehran, Iran

SELECTED PRIZES, HONORS, AND AWARDS

HLF Top 200	Selected as one of the top 200 young computer science and mathematics scientists by the *Heidelberg Laureate Forum (HLF)*	2024
Best PhD Thesis Award	IEEE TCCLD Outstanding Ph.D. Thesis Award	2022
Best PhD Thesis Award	IEEE TCSC Outstanding Ph.D. Dissertation Award	2022
Best Solution Architect Award	Oracle Cloud Architect of the Year Award	2022
Most Popular Paper	IEEE Transactions on Mobile Computing (CORE Rank A*)	2021
IEEE Outstanding Service Award	For services as Cyber Chair and Proceedings in CCGRID 2020-2021 (CORE Rank A)	2021
Most Popular Paper	IEEE Transactions on Mobile Computing (CORE Rank A*)	2020
Rowden White Scholarship	Selected as the Highly Talented Graduate Student among all Graduate Students at The University of Melbourne	2019
National Elites Foundation Award	The Iranian National Elites Foundation Award and Prize (Top 0.1%)	2015

SELECTED RESEARCH GRANTS

Implementing Stealthy Attacks against Industrial IoT Systems   Mar 2023 - Nov 2023
A. Shaghaghi, M. Goudarzi   AUD$6,000
— Taste of Research (ToR) Grant, UNSW Sydney, Australia

Extending CSE-Cisco IoT Intelligent Transport Testbed   Mar 2023 - Nov 2023
M. Goudarzi, A. Shaghaghi   AUD$6,000
— Taste of Research (ToR) Grant, UNSW Sydney, Australia

Trustworthiness in Internet of Things (IoT) Systems   Jan 2023 - Sep 2023
A. Shaghaghi, M. Goudarzi   AUD$10,000
— Faculty Seed Grants, UNSW Sydney, Australia

Deployment of Real-time IoT Applications in Highly Distributed Edge Computing   Feb 2022 - Jun 2022
M. Goudarzi   AUD$5,000
— Research Artifact Grant, The University of Melbourne, Australia

Resource Management for Diverse IoT Applications   May 2021 - Oct 2021
M. Goudarzi, R. Buyya   USD$12,000
— ARM Accelerator Grant, Oracle, USA

SELECTED PUBLICATIONS

1. Zhiyu Wang, **Mohammad Goudarzi**, and Rajkumar Buyya. TF-DDRL: A Transformer-enhanced Distributed DRL Technique for Scheduling IoT Applications in Edge and Cloud Computing Environments. *IEEE Transactions on Services Computing*, pages 1–16, 2025. **(CORE A*, JCR Q1)**

2. Shohreh Deldari, **Mohammad Goudarzi**, Aditya Joshi, Arash Shaghaghi, Simon Finn, Flora D Salim, and Sanjay Jha. AuditNet: Conversational AI Security Assistant. In *Adjunct Proceedings of the 26th International Conference on Mobile Human-Computer Interaction*, pages 1–4, 2024

3. Arash Shaghaghi, **Mohammad Goudarzi**, Simon Finn, Shohreh Deldari, Aditya Joshi, Jesse Laeuchli, Flora Salim, and Sanjay Jha. Method and device for determining security compliance of network infrastructure, 2024. Patent No. AU2024902235, Filed in the Australia. **(Patent with Cisco)**

4. Zhiyu Wang, **Mohammad Goudarzi**, and Rajkumar Buyya. ReinFog: A DRL Empowered Framework for Resource Management in Edge and Cloud Computing Environments. *arXiv preprint arXiv:2411.13121*, 2024

5. Zhiyu Wang, **Mohammad Goudarzi**, Mingming Gong, and Rajkumar Buyya. Deep Reinforcement Learning-based Scheduling for Optimizing System Load and Response Time in Edge and Fog Computing Environments. *Future Generation Computer Systems*, 152:55–69, 2024. **(CORE A, JCR Q1)**

6. **Mohammad Goudarzi**, Maria A. Rodriguez, Majid Sarvi, and Rajkumar Buyya. μ-DDRL: A QoS-Aware Distributed Deep Reinforcement Learning Technique for Service Offloading in Fog Computing Environments. *IEEE Transactions on Services Computing*, 17(1):47–59, 2024. **(CORE A*, JCR Q1)**

7. **Mohammad Goudarzi**, Marimuthu Palaniswami, and Rajkumar Buyya. A Distributed Deep Reinforcement Learning Technique for Application Placement in Edge and Fog Computing Environments. *IEEE Transactions on Mobile Computing*, 22(5):2491–2505, 2023. **(CORE A*, JCR Q1)**

8. **Mohammad Goudarzi**, Marimuthu Palaniswami, and Rajkumar Buyya. Scheduling IoT Applications in Edge and Fog Computing Environments: A Taxonomy and Future Directions. *ACM Computing Surveys*, 55(7):1–41, 2022. **(CORE A*, JCR Q1)**

9. Redowan Mahmud, Samodha Pallewatta, **Mohammad Goudarzi**, and Rajkumar Buyya. iFogSim: An extended iFogSim Simulator for Mobility, Clustering, and Microservice Management in Edge and Fog Computing Environments. *Journal of Systems and Software*, 190:111351, 2022. **(CORE A, JCR Q1)**

10. Qifan Deng, **Mohammad Goudarzi**, and Rajkumar Buyya. FogBus2: a Lightweight and Distributed Container-based Framework for Integration of IoT-enabled Systems with Edge and Cloud Computing. In *Proceedings of the Big Data in Emergent Distributed Environments (BiDEDE'21) in conjunction with the 2021 ACM SIGMOD/PODS Conference*, pages 1–8, 2021

11. **Mohammad Goudarzi**, Huaming Wu, Marimuthu Palaniswami, and Rajkumar Buyya. An Application Placement Technique for Concurrent IoT Applications in Edge and Fog Computing Environments. *IEEE Transactions on Mobile Computing*, 20(4):1298–1311, 2020. **(CORE A*, JCR Q1)**

12. **Mohammad Goudarzi**, Marimuthu Palaniswami, and Rajkumar Buyya. A Fog-driven Dynamic Resource Allocation Technique in Ultra Dense Femtocell Networks. *Journal of Network and Computer Applications*, 145:102407, 2019. **(CORE A, JCR Q1)**

13. **Mohammad Goudarzi**, Mehran Zamani, and Abolfazl Toroghi Haghighat. A Fast Hybrid Multi-site Computation Offloading for Mobile Cloud Computing. *Journal of Network and Computer Applications*, 80:219–231, 2017. **(CORE A, JCR Q1)**