

XIAOFAN YU

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EDUCATION

Ph.D., Computer Science and Engineering. University of California, San Diego, CA, USA Advisor: Tajana Šimunić Rosing	2023 (expected)
M.S., Computer Science and Engineering University of California, San Diego, CA, USA	Jun. 2020
B.S., Electronics Engineering Peking University, Beijing, China	Jul. 2018
Non-Degree Academic Experiences: Global Research Experience in Advanced Technologies (GREAT) Program University of California, Davis, CA, USA Advisor: Soheil Ghiasi	2017

RESEARCH INTERESTS

- IoT networks design and optimization for robustness and reliability
- sustainable IoT networks with automated sensor deployment
- lifelong learning on low-power edge devices

Relevant fields: Internet of Things, edge computing, network optimization, machine learning

JOURNAL ARTICLES

- J2. X. Yu, K. Ergun, L. Cherkasova, T. Rosing, "Optimizing Sensor Deployment and Maintenance Costs for Large-Scale Environmental Monitoring", *IEEE Transactions on Computer Aided Design of Integrated Circuits and Systems (TCAD)*, vol. 39, no. 11, pp. 3918-3930, 2020
- J1. D. Fong, X. Yu, J. Mao, M. Saffarpour, R. Abueshsheikh, P. Gupta, A. V. Alcantar, E. Kurzrock, S. Ghiasi, "Restoring the Sense of Bladder Fullness for Spinal Cord Injury Patient", *Smart Health*, vol. 9, pp. 12-22, 2018

CONFERENCE PROCEEDINGS

- C5. Y. Guo, X. Yu, K. Chaudhuri, T. Rosing, "Active Sampling for Distributed Training in Heterogeneous Sensor Networks", *IEEE International Conference on Mobility, Sensing and Networking (MSN)*, 2020
- C4. X. Yu, X. Song, L. Cherkasova, T. Rosing, "Reliability-Driven Deployment in Energy-Harvesting Sensor Networks", in *International Conference on Network and Service Management (CNSM)*, 2020
- C3. K. Ergun, X. Yu, N. Nagesh, L. Cherkasova, P. Mercati, R. Ayoub, T. Rosing, "Simulating Reliability of IoT Networks with RelIoT", *IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)*, 2020
- C2. K. Ergun, X. Yu, N. Nagesh, L. Cherkasova, P. Mercati, R. Ayoub, T. Rosing, "RelIoT: Reliability Simulator for IoT Networks", *International Conference on Internet of Things (ICIOT)*, 2020
- C1. X. Yu, R. Yu, J. Yang, X. Duan, "A Robotic Auto-Focus System based on Deep Reinforcement Learning", *International Conference on Control, Automation, Robotics and Vision (ICARCV)*, 2018

INDUSTRIAL INTERNSHIPS

Arm Research (Remote Internship), Austin, TX, USA Mentor & Manager: Ludmila Cherkasova & Gary Carpenter Project: Automating Robust and Fault-Tolerant LoRa-based IoT Networks Design	Jun. 2020-Sep. 2020
Kolmostar Inc. , Fremont, CA, USA Manager: Wensheng Hua Project: Firmware update for ultra-low power GNSS module and module tests automation	Jun. 2019-Sep. 2019

HONORS AND AWARDS

Graduate Student Fellowship, CSE, UCSD	2018
Excellent Graduate Student, School of EECS, PKU	2018
First Prize in Oral Presentation of Undergraduate Research, School of EECS, PKU	2017
Award for Outstanding Research Performance in GREAT Program, UC Davis	2017
Merit Student, PKU	2017, 2016
SK Scholarship	2016

TECHNICAL SKILLS

Programming Languages	C, C++, Python, Shell, VHDL, Verilog
Development Tools	Vim, Git, L ^A T _E X, MATLAB, CVX, CPLEX, SNOPT, ns-3, Keil μ Vision, Eagle
Operating Systems	Windows, Mac OS X, Linux, RTOS
Embedded Platforms	Raspberry Pi, Arduino, Particle Photon, NXP Arm-based MCUs