Jiahao Xue

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Publications

Bandwidth Allocation for Federated Learning with Wireless Providers and Cost Constraints
IEEE Transactions on Mobile Computing 2023

- Wireless network resource optimization and management for federated learning. A new bandwidth allocation and access control method is developed to improve the communication efficiency of federated learning

Data-Driven Next-Generation Wireless Networking: Embracing AI for Performance and Security
International Conference on Computer Communications and Networks 2023

- A systematic study on the recent application of machine learning on wireless networks. We review how AI can be used to improve the next-generation network and predict the future

Effective spatio-temporal regimes for wound treatment by way of macrophage polarization: a mathematical model
Frontiers in Applied Mathematics and Statistics 2022

- A mathematical model, optimization, and solution to the wound treatment. The real-world non-linear wound treatment process is modelled and optimized by optimization algorithm

Projects

Robotic Arm control | *Python* Mar 2021

- Built and simulated a model in CoppeliaSim of 4-DOF robotic arm in order to catch egg softly. Python script is used.

DARPA: Bioelectronic Intelligent Control of Wound Regeneration (BETR) | *Matlab* June 2020

- A DARPA project for wound trearment, details can be found in my publication 2022

TurtleBot and ROS | *Python* Dec 2019

- Developed a Python script to remote control and navigate TurtleBot

Education

University of South Florida Tampa, FL
Doctor of Philosophy in Electrical Engineering, Minor in Wireless Networking *Sep. 2021 – Sep 2026*

University of California, Santa Cruz Santa Cruz, CA
Master in Electrical Engineering *Sep. 2019 – Sep 2021*

Huazhong University of Science and Technology Hubei, China
Bachelor in Marine Engineering *Sep. 2014 – Sep 2018*

Teaching

Teaching Assistant Jan 2022 – Present
University of South Florida

- Electrical System

Technical Skills

Languages: Matlab, Python
Developer Tools: PyCharm, Anaconda