Jiang Liu

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EDUCATION

China University of Mining and Technology, Xuzhou, CHN **2019.09 - Present**

MA.Eng | Information and Communication Engineering | GPA:87.4/100

Awards: 2021 University-Level First Prize Scholarship (Top 20%)

2020 University-Level Second Prize Scholarship (Top 30%)

2019 University-Level First Prize Scholarship (Top 20%)

China University of Mining and Technology, Xuzhou, CHN **2015.09 - 2019.06**

B.E. | Electronics and Information Engineering | GPA: 3.4/4

Awards: 2019 Oversea Training Program Scholarship (Top 5%)

2018 Academic Excellence Scholarship (Top 30%)

Arizona State University, Arizona, USA **2019.01 - 2019.03**

Global Launch | Semester exchange

Research: reviewed the commonly-used indoor localization technologies and displayed the results through a poster session.

PUBLICATIONS

Journal papers:

Yang, Y. , **J Liu**, Wang, W. , Cao, Y. , & Li, H. . (2021). Incorporating slam and mobile sensing for indoor co2 monitoring and source position estimation - sciencedirect. Journal of Cleaner Production.

LI Shiyin, ZHU Yuan, **LIU Jiang**, WANG Xiaoming, YANG Yuan. (2021). Research on 3D UWB indoor positioning method based on SAE-RF. Transducer and Microsystem Technologies.

Jiang Liu, Shiyin Li, Wei Wang, Yao Fu, Mudi Wu, Yuan Yang. Indoor air contaminant source detection using a filter-based ANN regression via distributed sensors. Building and Environment.2021(Submitted)

Patents:

Liu Jiang . 2021.Indoor multi-source environment health index monitoring and evaluating method based on mobile robot. CN112113603. Filed December 22,2020, and issued July 23,2021.

Liu Jiang . 2021.Indoor positioning fingerprint database comprehensive generation method based on WiFi multipath similarity. CN111565452. Filed August 21,2020, and issued January 12,2021.

Liu Jiang . Indoor personnel positioning method based on feature extraction adaptive neural network and CO2. CN112484734. Filed March 12, 2021.Patent Pending.

RESEARCH EXPERIENCE

Environment multi-source perception based on indoor location service **2019.09 - 2020.09**

Research project supported by the national natural science foundation of China

- Automatically detected indoor pollutant sources and sensed the indoor air quality (IAQ)
- Used one-dimensional Kalman filtering and two-dimensional interpolation heat-map
- Published 1 SCI paper and granted 1 patent.

Indoor air contaminant source detection based on machine learning **2020.09 - present**

Research project supported by the national natural science foundation of China

- Used machine learning regression methods to identify the exact position of contaminant source.
- Evaluated and compared KNN, LR, SVR and ANN regression machine learning algorithms
- 1 SCI paper was submitted and 1 patent was filed.

Indoor fusion positioning **2020.05 - present**

Research project supported by the national natural science foundation of China

- Used K-means, KNN, WKNN for UWB fingerprint localization.
- Used Particle filtering to combine UWB, IMU and map for indoor positioning.
- Published 1 paper and granted 1 patent.

PROFESSIONAL EXPERIENCE

Security system and positioning system of Xuzhou first people's Hospital **2020.07 - 2021.01**

Assistant of Project Manager

- Participated in the test and acceptance of more than 1000 cameras, 300 face recognition access control, 100 electronic signs in parking lots and 200 alarm buttons.
- Participated in the test and acceptance of Bluetooth Based Navigation System in the hospital, and checked more than 200 Bluetooth beacons.
- Participated in the UWB positioning effect test and acceptance of geriatrics department, and communicated with developers.

Electrical and electronic technology course **2020.03 - 2020.06**

Teaching assistant of Prof. Liu

- Reminded 120 students in four classes to complete their online homework.
- Undertook the guidance and Q & A of the course, and summarized the questions to the teacher.
- Summarized the results with Excel after the final examination.

SKILLS

- Programming languages: Matlab (proficient), Python (proficient), Java (Competent)
- Algorithm: Particle filtering, Kalman filtering, machine learning algorithm like LR, SAE, DNN, RF, SVM, interpolation algorithm, clustering algorithm, fusion positioning algorithm.
- Language: English, Mandarin