Mei Wang

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IEEE Student Member ⋄ http://maywang-sjtu.github.io

EDUCATION

Shanghai Jiao Tong University   09/2012 - 06/2016

B.S.E. in Information Engineering & Minor in Computer Science

IEEE Honor Class[1], Overall GPA: 3.74/4.3 (87.42/100), Ranking: 14/78 (Top 2 in major EE)

PUBLICATIONS & PATENTS

[1] **M. Wang**, Z. Zhang, X. Tian, and X. Wang, **"Temporal Correlation of the RSS Improves Accuracy of Fingerprinting Localization"**, accepted to *Proc. IEEE INFOCOM*, 2016.

[2] Z. Zhang, **M. Wang**, D. Liu, X. Tian, and X. Wang, **"Squeeze More from the Fingerprints Reporting Strategy for Indoor Localization"**, submitted to *Proc. IEEE INFOCOM*, 2016.

[3] **M. Wang**, D. Xu, W. li, X. Tian, and X. Wang, **"A method to improve the accuracy of fingerprinting localization by utilizing temporal correlation of RSS"**, China, Invention Patent, DAG22079.

RESEARCH EXPERIENCES

Research Assistant in **Research Center of Intelligent Internet of Things** (IIoT).
Supervised by **Prof. Xinbing Wang & Prof. Xiaohua Tian**.

Research on Temporal Correlation of RSS in Fingerprinting Localization   03/2015 - Present

Indoor localization   *Group Leader*

- · Modeled a theoretical framework on the fundamental limits of fingerprint-based localization, like accuracy and reliability, when considering the temporal correlation of the signal strength.
- · Elaborated the mechanism on how temporal correlation of the Received Signal Strength (RSS) can correct the localization determination criteria of the Maximum Likelihood Estimation.
- · Conducted experiments to analyze the influential temporal correlation parameters, and implemented a system to demonstrate the improvement by leveraging the temporal correlation of RSS.

User-behavior based Optimization Methodology for CloudNFV Network   01/2015 - Present

Cellular Network   *Group Leader*

- · Devised a probabilistic Traffic Model for typical behaviours of substantial mobile users in cellular network.
- · Developed a resource allocation mechanism for function nodes with Network Function Virtualization (NFV).
- · Designed adaptive dynamic optimization algorithms to improve the performances of the NFV framework.

Location Based Services System Development cooperating with *Foxconn*   7/2015 - 12/2015

Indoor Localization System on iOS platform   *iOS Team Leader*

- · Lead team members to develop an application of indoor localization on iOS platform for Foxconn, including RSS scanning, Map displaying, Pedometer, Info and communication components.
- · Designed and implemented localization determination algorithms, with both online k Nearest Neighborhood for Wi-Fi RSS figerprints and offline gradient descent method for Bluetooth RSS.

Load Testing Simulator Tool in Dallas Cooperation Project with *Ericsson*   7/2014 - 4/2015

Communication System   *Core member*

- · Renovated the traffic model as state machine and probability matrix for user activities in WCDMA network.
- · Wrote a simulation software to model the user behaviors of the cellular network with error within 0.1 %.
- · Simulated the traffic packages and user activity transitions in MATLAB to prove the stability of model.

Crowdsourcing based Lane-level Vehicular Localization with Smartphones   9/2014 - 1/2015

Intelligent Transportation   *Member*

- · Designed Client/Server system model to realize lane-level localization for unmanned vehicle and navigation.
- · Leveraged the sensors in smartphone and fused by Interacting Multiple Model to find vehicles' trajectories.
- · Determined the number of lanes on-time and classified the vehicle location with more than 90 % accuracy.

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[1]IEEE Honor Class: http://english.seiee.sjtu.edu.cn/english/info/8338.htm

ACADEMIC PROJECTS & COMPETITIONS

Identification and Warning for Large Pedestrian Flow in Urban Areas 06/2015 - Present

2015 3rd Chun-Tsung Program of SJTU *Leader*
  · Created a dynamic model for large pedestrian flow with consideration of variety of factors and integrated methodologies with localization and video analysis for urban areas.
  · Warned the peak flow when indicated by reasonable overcrowding thresholds of velocity, density and counting. Provided evacuation measures with pedestrian prediction of the area.
  · Verified the model and algorithms by pedestrian modeling, analysis and simulation in some representative cases.

City-Drive: A Map-Generating and Speed Optimizing Driving System 11/2014 - 11/2015

The 7th University Innovative Participate Program in Shanghai *Member*
  · Generated a road map and infered traffic signal schedules, using only smartphones and a server, automatically crowdsourcing from clint sensors, like gyroscope and GPS modules.
  · Inducted the traffic signal schedule in complex intersections through the traffic light deduction algorithms and traffic signal phases, with simulation result of less than 1 sec error.
  · Provided recommended speeds for drivers to maximize the probability that vehicles cruise intersections in green phase without brakes so as to reduce energy consumption over 50 %.

LoveDrop: An Android Game Application to Record Daily Life of Lovers 12/2014

2014 Google Girls Hackathon Party *Member*
  · Developed an Android application named as "Love Drop", a game application for lovers in this hackathon party, only opened for women students engineers held by Google Shanghai.
  · Exploited three main functions of this LoveDrop game app – the love tree cultivation for beautiful memory, the beat vent tool game for catharsis, and a log history for dairy growth.

AWARDS & SCHOLARSHIPS

  - Chun-Tsung Scholarship (Top 3%) 2014-2015

  - Fanxuji Scholarship (Top 5%) 2013-2015

  - Academic Excellence Scholarship of SJTU (Top 10%) 2013-2015

  - Panwenyuan Scholarship (Top 5%) 2012-2013

  - National Encouragement Scholarship (Top 10%) 2012-2013

  - **Merit Student & Excellent League Member** of SJTU 2012-2013

  - **Winning prize** of 3rd *Tsien Hsueshen Cup* College Students technological innovation contest 2015

  - **First prize** in *GOOGLE* Girls Hackathon Party 2014

  - **Third prize** of the fifth *PRO-FACE* Man-machine interface programming contest 2012

EXTRACURRICULAR ACTIVITY

Professional Activities 09/2014 - 11/2015
  · Guest reviewer at IEEE INFOCOM 2016 & IEEE Network Magazine 2015
  · Guest student in National Chiao Tung University Summer Academic Exchange Camp

Student Organizations 09/2012 - 09/2014
  · Director of Organization Department of Community Committee in SEIEE
  · Member of the student union of SEIEE / Young Volunteer team of SJTU
  · College Women Basketball Team / Xizhou Guqin Society / Student Choir of SJTU / English Cornor

Volunteering Activities 09/2012 - 09/2015
  · Volunteered in Shanghai International Marathon, Shanghai Railway Station, Freshman welcome meeting, Wujing Social Environment-friendly publicity, Shanghai Science and Technology Museum. Blood donation.

TECHNICAL STRENGTHS

Programming Skills: C++, Python, JAVA, Erlang, Android, iOS, LabVIEW, MATLAB, LaTeX

English Ability: TOEFL 101 (S 23); GRE 315 (AW 3.5).