

# Hua Huang

## Contact Information

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## Education

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**Ph.D in Computer Engineering** Jan. 2015.- May. 2018  
Stony Brook University, NY, USA.(GPA: 3.7/4.0) Advisor: Shan Lin, Ph.D.

**MS in Computer and Information Sciences** Sept. 2012 - Dec. 2014  
Temple University, PA, USA.(GPA: 3.7/4.0) Advisor: Shan Lin, Ph.D.

**B.E. in Electronic and Information Engineering (Advanced Class)** Sept. 2008 - May. 2012  
Huazhong University of Science and Technology, Wuhan, China

## Project Experience

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**Toothbrushing Monitoring using Smart Watch** March. 2015 - present

- Designed and tested machine learning algorithms, including SVM, neural networks, and naive Bayes. Achieved 85% recognition precision. Published in Sensys'16 (Acceptance Rate: 17%). (Android, Python)
- Built an on-line toothbrushing activity recognition system. Demo demonstrated in conference.
- Used cloud services to reliably collect sensor data from 12 users for 3 weeks. (Amazon Web Service AWS)

**Device-free Indoor Localization** Jan. 2014 - March. 2015

- Designed a device-free indoor localization algorithm that detects pedestrians automatically. (Matlab)
- Built a prototype system with 3 senders and 1 receiver. (C++, Linux, tcpdump)

**Wireless Camera Network Deployment** Sept. 2012 - Aug. 2013

- Designed computational geometric algorithms for smart camera deployment. Published in Infocom'14.
- Built a 3-node wireless camera network testbed. (BeagleBone)
- Built a simulation framework that rely on various GIS algorithms. (C#)

**Mobile Charger Scheduling** Jan. 2013 - Dec. 2014

- Designed novel algorithms based on real-time scheduling and computational geometry techniques. (Java)
- Built a simulation framework to test different algorithms and settings. Published in Mass'15.

**Billiard Guru** Hackathon@CEWIT, 2017

- A smartwatch-based system that automatically recognizes billiard playing performance. Finalist prize(6/20).

## Courses

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*Teaching Assistant* Mobile Cloud Computing, Lower Level Programming  
*Algorithm* Data Mining, Algorithm Design, Operating System, Programming Technique

## Publications

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- **H.Huang**, S. Lin. "Toothbrushing Monitoring using Wrist Watch." *ACM Sensys*, 2016. (Acceptance Rate: 21/119=17.6%)
- **H. Huang**, C. Ni, X. Ban, J. Gao, A. T. Schneider and S. Lin "Connected Wireless Camera Network Deployment with Visibility Coverage" *IEEE INFOCOM*, 2014.
- **H. Huang**, S. Lin, L. Chen, J. Gao, A. Mamat, J. Wu. "Dynamic Mobile Charger Scheduling in Heterogeneous Wireless Sensor Networks". *IEEE MASS*, 2015
- **H.Huang**, S. Lin. "Poster Abstract: Toothbrushing Recognition using Neural Networks" *ACM IoTDI*, 2017 (Accepted)

- L. Chen, S. Lin and **H. Huang**. "Charge Me If You Can: Charging Path Optimization and Scheduling in Mobile Networks" *ACM MobiHoc*, 2016
- K. Liu, J. Gao, S. Lin, **H. Huang** and B. Schiller. "Joint Sensor Duty Cycle Scheduling with Coverage Guarantee" *ACM MobiHoc*, 2016
- F. Miao, S. Lin, S. Munir, J. A. Stankovic, **H. Huang**, D. Zhang, T. He and G. J. Pappas "Taxi Dispatch with Real-Time Sensing Data in Metropolitan Areas - a Receding Horizon Control Approach" *ACM/IEEE 6th ICCPS*, 2015.
- **H. Huang**, C. Ni, X. Ban, J. Gao and S. Lin "Poster abstract: Connected Wireless Camera Network Deployment with Visibility Coverage" in Proc. of *ACM IPSN*, 2013.
- **H. Huang**, S. Lin, A. Mamat and J. Wu "Predictive Scheduling for Spatial-dependent Tasks in Wireless Sensor Networks", in WiP Proc. of *IEEE RTAS*, 2013.