

Yiran Shen

CONTACT INFORMATION	College of Computer Science and Technology, Harbin Engineering University, Harbin, China, 150001	shenyiran@hrbeu.edu.cn
WORKING EXPERIENCE	College of Computer Science and Technology , Harbin Engineering University, China	
	Associate Professor	October 2015 to Current
	<ul style="list-style-type: none">Research area: mobile/ wearable computing, Energy-efficient sensors system Singapore-MIT Alliance for Research and Technology , Massachusetts Institute of Technology	
	SMART Scholar	September 2014 to October 2015
	<ul style="list-style-type: none">Research area: wearable/mobile computingAdvisor: Chair Prof. Daniela Rus, Director of CSAIL, MIT	
EDUCATION	University of New South Wales and CSIRO , Australia	
	Ph.D., Computer Science and Engineering, Jul 2014	
	<ul style="list-style-type: none">Thesis Title: <i>Addressing Three Problems in Embedded Systems Via Compressive Sensing Based Methods</i>Research Area: <i>Multimedia Sensor Systems</i>Advisors: Prof. Chun Tung Chou and Dr. Wen Hu	
	University of Oxford , Oxford, UK	
	Visiting PhD Student., Invited by Department of Computer Science, Sponsored by Google PhD Fellowship, April 2014	
	<ul style="list-style-type: none">Research Project: <i>Compressive Sensing for Localisation</i>Advisor: Prof. Niki Trigoni	
	Shandong University , Jinan, China	
	B.E., Communication Engineering, June, 2010	
RESEARCH FUND	<ul style="list-style-type: none">Study on the Cyber Security of Wearable IoTs Based on Gait Analysis, RMB 250, 000 PI, via National Natural Science Foundation of China Jan 2018 - Dec 2020Cyber Security in IoTs, RMB 80, 000 sole PI, via China Postdoctoral Science Foundation Jan 2017- Dec 2018New Faculty Startup Fund, RMB 300, 000 PI 2016-2018Users Activity Recognition on Wearable Systems funded via SMART Scholar Fellowship S\$90,000, PI 2014-2015	
AWARDS	MIT SMART Scholars Fellowship 2014-2015	
	<ul style="list-style-type: none">The fellowship is prominent and highly competitive (4 awardees out of 57 applications, only 7% success rate). SMART Scholars Fellowship is used to support the awardees to conduct the research of their own choices.	
	2013 Google Ph.D Fellowship in Computer Networking Jun 2013	
	<ul style="list-style-type: none">Google Ph.D Fellowship was created to recognise outstanding graduate students doing exceptional work in computer Science, related disciplines, or promising research area. In 2013, Google awarded 39 students worldwide from 39 different areas (one for each area). Ph.D students from eligible universities have chance to be nominated. There are 2 students from Australia received the Fellowship. I am the first one from UNSW.	

JOURNAL
PUBLICATIONS

1. *Sensor-assisted Multi-view Face Recognition System on Smart Glass*, Weitao Xu, **Yiran Shen***, Neil Bergmann, Wen Hu, online, IEEE Transactions on Mobile Computing (TMC), 2017, **IF: 3.822**, (*corresponding author, **CORE Ranking A***)
2. *Learn to Recognise: Exploring Priors of Sparse Face Recognition on Smartphones*, **Yiran Shen**, Mingrui Yang, Bo Wei, Chun Tung Chou, Wen Hu, IEEE Transaction on Mobile Computing (TMC), 16(6), 1705-1717, 2017, **IF: 3.822 (CORE Ranking A*)**
3. *Realtime and Robust Background Subtraction in Embedded Camera Networks*, **Yiran Shen**, Wen Hu, Mingrui Yang, Junbin Liu, Bo Wei, Simon Lucey, Chun Tung Chou, IEEE Transaction on Mobile Computing (TMC), 15(2), 406-418, 2016 **IF: 3.822 (CORE Ranking A*)**
4. *CS²-collector: A New Approach for Data Collection in Wireless Sensor Networks Based on Two Dimensional Compressive Sensing*, Yong Wang, Zhuoshi Yang, Jianpei Zhang, Feng Li, Hongkai Wen, **Yiran Shen***, **SENSORS**, 16(8), 2016 (*corresponding author). **IF: 2.677**
5. *Nonuniform Compressive Sensing for Heterogeneous Wireless Sensor Networks*, **Yiran Shen**, Wen Hu, Rajib Rana, Chun Tung Chou, **IEEE Sensors Journal**, 13(6), 2120-2128, 2013 **IF:2.512**

CONFERENCE
PUBLICATIONS

1. *Normal Direction Local Binary Pattern for Fragment Reconstruction*, Liguozhang, Jianguo Sun, Hongtao Song, **Yiran Shen***, IEEE International Conference on Multimedia and Expo (ICME 2017), accepted to appear, July 2017, Hong Kong (**Full paper**, *corresponding author, **CORE Ranking B**)
2. *Gait-Watch: A Context-aware Authentication System for Smart Watch Based on Gait Recognition*, Weitao Xu, **Yiran Shen***, Yongtuo Zhang and Wen Hu, 2nd IEEE International Conference on Internet-of-Things Design and Implementation (IoTDI 2017), April 2017, Pittsburgh USA, acceptance rate: 29% (**Full paper**, *corresponding author)
3. *Sensor-assisted Face Recognition System on Smart Glass via Multi-view Sparse Representation Classification*, Weitao Xu, **Yiran Shen***, Neil Bergmann and Wen Hu, 15th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN), April 2016, acceptance rate: 19% (**Full paper**, *corresponding author, **Full paper**, **CORE Ranking A***).
4. *Poster: An Online Approach for Gait Recognition on Smart Glasses*, **Yiran Shen**, Chengwen Luo, Weitao Xu, Wen Hu, The 13th ACM Conference on Embedded Networked Sensor System (**SenSys'15**), Nov 2015, Seoul Korea.
5. *Opportunistic Radio Assisted Navigation for Autonomous Ground Vehicles*, Hongkai Wen, **Yiran Shen**, Savvas Papaioannou, Winston Churchill, Niki Trigoni, Paul Newman, International Conference on Distributed Computing in Sensor systems (**DCOSS**), June 2015 (**Full paper**, **CORE Ranking B**)
6. *Face Recognition on Smartphones Via Optimised Sparse Representation Classification*, **Yiran Shen**, Wen Hu, Mingrui Yang, Bo Wei, Simon Lucey, Chun Tung Chou, The 13th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN), April 2014, Berlin, Germany. Acceptance rate: 20% (**Full paper**, **CORE Ranking A***)

	<ol style="list-style-type: none"> 7. <i>Real-time Classification via Sparse Representation in Acoustic Sensor Networks</i>, Bo Wei, Mingrui Yang, Yiran Shen, Rajib Rana, Chun Tung Chou, Wen Hu, 11th ACM Conference on Embedded Networked Sensor Systems (Sensys), Nov 2013, Rome, Italy. Acceptant rate 17%. (Full paper, CORE Ranking A*) 8. <i>Efficient Background Subtraction for Real-time Tracking in Embedded Camera Networks</i>, Yiran Shen, Wen Hu, Junbin Liu, Mingrui Yang, Bo Wei, Chun Tung Chou, The 10th ACM Conference on Embedded Networked Sensor Systems (SenSys), Nov 2012, Toronto, Canada. Acceptance rate: 19% (Full paper, CORE Ranking A*) 9. <i>Poster Abstract: Projection Matrix Optimisation for Compressive Sensing Based Applications in Embedded Systems</i>, Yiran Shen, Wen Hu, Mingrui Yang, Bo Wei and Chun Tung Chou, 11th ACM Conference on Embedded Networked Sensor Systems (Sensys), Nov 2013, Rome, Italy. 10. Poster abstract: <i>Efficient Background Subtraction for Tracking in Embedded Camera Networks</i>, Yiran Shen, Wen Hu, Mingrui Yang, Junbin Liu, and Chun Tung Chou. In Proceedings of the 11th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN), April, 2012, Beijing, China. 11. <i>Non-uniform Compressive Sensing in Wireless Sensor Networks: Feasibility and Applications</i>, Yiran Shen, Wen Hu, Rajib Rana and Chun Tung Chou. In Proceedings of Seventh International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP), Dec 6-9, 2011 Adelaide, Australia. (Full paper, CORE Ranking B)
BOOK/ BOOK CHAPTER	<ol style="list-style-type: none"> 1. <i>Addressing Problems in Embedded Systems via Compressive Sensing: Theory, Methodology and Application</i>, Yiran Shen, Book, ISBN: 978-3-659-67068-8.
SERVICE	<ul style="list-style-type: none"> • 2017 Pacific-Rim Conference on Multimedia, Special Session Organiser • 2017 IEEE VTC Spring, Technical Program Committee Member • 2015 EWSN, Technical Program Committee Member of poster and demo session • 2015 IEEE ISSNIP, Technical Program Committee Member • 2014 European Conference on Wireless Sensor Networks, local arrangement
PRESENTATIONS	<ul style="list-style-type: none"> • Oral Presentation on IPSN, Berlin, Germany Apr 2014 • Poster Presentation on Sensys, Rome, Italy Nov 2013 • Oral Presentation on Sensys, Toronto, Canada Nov 2012 • Poster Presentation on IPSN, Beijing, China Apr 2012 • Oral Presentation on ISSNIP, Adelaide, Australia Nov 2011
REVIEW EXPERIENCE	<ul style="list-style-type: none"> • Journals: IEEE TMC, IEEE TOSN, IEEE TVT, Elsevier PMC, Ad Hoc Networks, • Conferences: ACM SenSys, ACM/IEEE IPSN, ACM MobiSys, IEEE LCN, IEEE Globecom, IEEE SenseApp, Military Communication Conference