CHI-JUI WU

Interactive Systems Research Group, Office A27
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RESEARCH INTERESTS

My research is in the field of Human-Computer Interaction and Ubiquitous Computing, specifically in Cross-Device Interaction and Proxemic Interaction. I explore conceptualizations and interaction designs within multi-device interactive spaces, including novel interaction techniques for mobile and wearable devices, sensor-based systems, and the Internet of Things. I build supporting software infrastructures for cross-device interaction and leverage machine intelligence to enhance sensing capabilities within interactive spaces. My current research is focused on ad hoc device ecologies and blended virtual and physical spaces, forming a critical lens on existing notions of devices, objects, time, people, activities, and meaning in spaces. I also evaluate cross-device interaction as a problem-solving capacity for in-the-wild challenges such as in education and mental health domains.

EDUCATION

PhD. Computer Science
Lancaster University, UK
Supervisor: Dr. Steven Houben

January 2018 – Present

MRes. Computational Statistics and Machine Learning, *Distinction*
University College London, UK
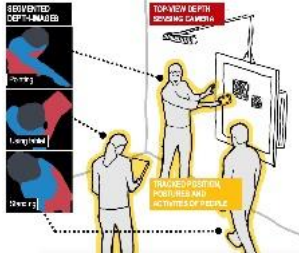Supervisors: Dr. Nicolai Marquardt, Dr. Steven Houben

September 2015 – September 2016

BSc. Computer Science, *First-Class Honours*
University of St Andrews, UK
Supervisor: Dr. David Harris-Birtill

September 2011 – June 2015

PUBLICATIONS

C.1 Chi-Jui Wu, Steven Houben, Nicolai Marquardt. 2017. EagleSense: Tracking People and Devices in Interactive Spaces using Real-Time Top-View Depth-Sensing. In *Proceedings of the 35th Annual ACM Conference on Human Factors in Computing Systems* (Denver, Colorado, USA, May 6 - 11, 2017). CHI'17. ACM, New York, NY.

J.1 Chi-Jui Wu, Aaron Quigley, David Harris-Birtill. 2017. Out of Sight: A Toolkit for Tracking Occluded Human Joint Positions. In *Personal and Ubiquitous Computing*, 21(1), 125-135. Springer London.

RESEARCH EXPERIENCE

Research Intern, University College London, UK
Explored interaction techniques and toolkits within physical computing, ubiquitous computing, proxemic interaction, and sensor-based systems. Developed a real-time depth-sensing tracking infrastructure for ad hoc cross-device interaction using computer vision and machine learning.
Supervisors: Dr. Nicolai Marquardt, Dr. Steven Houben

November 2015 – September 2016

Research Intern, University of St Andrews, UK
Explored computer system infrastructures for software recomputation. Developed a web application that can create a lightweight virtual machine for any GitHub project from source using Vagrant.
Supervisor: Professor Ian Gent

June 2015 – September 2015

Research Intern, University of St Andrews, UK
Investigated relationships between depth-sensing visualization and users' visual and spatial awareness. Conducted user studies to validate hypotheses about interacting with large displays using Microsoft Kinect.
Supervisors: Professor Aaron Quigley, Dr. Per Ola Kristensson

June 2014 – September 2014

TEACHING EXPERIENCE

English TA, Wanrong Junior High School, Hualien, Taiwan
Assisted English teaching in a rural school in Eastern Taiwan as a part of the substitute military service. Led students in multiple English singing, reader's theatre, speech, and story-telling contests. Helped students find their mainspring of life. Received an excellence award.

January 2017 – January 2018

Personal Tutor   January 2010 – January 2018
Mathematics and Chemistry (high school), Computer Science (undergraduate and graduate), and English (non-native speakers)

SCHOLARSHIPS AND GRANTS

Faculty of Science and Technology Scholarship, Lancaster University, UK   January 2018
Amount: £14,500 / year * 3 years

ACM ISS 2016 Student Travel Grant   August 2016
Amount: $1,500

International Undergraduate Scholarship, University of St Andrews, UK   September 2011
Amount: £2,500 / year * 4 years

ACADEMIC SERVICE

Reviewer: Since October 2017
ACM CHI 2018

AWARDS

Honourable Mention, UCL Data Science Student Challenge, UK	February 2016
Best Use of Mendeley API, Hack Cambridge, UK	January 2016
Dean's List, University of St Andrews, UK	June 2015
Dean's List, University of St Andrews, UK	June 2014
Finalist, Barclays Openminds Hackathon, UK	November 2013
Winner, J.P. Morgan Code for Good Challenge, UK	November 2013

SKILLS

Programming Languages
Java, Python, C, C++, C#, MATLAB, JavaScript, Go, Haskell

Markup Languages
HTML, CSS, Markdown, LaTeX

Software Development Frameworks, Tools, and Libraries
Scientific Computing, Computer Vision, Machine Learning, Graphics, Information Visualization, Virtualization, Version Control and Continuous Integration, User Interface, Sensors, Physical Prototyping, Mobile and Wearable, Web, Game

Natural Languages
English (fluent), Chinese (native, fluent), Taiwanese (native, fluent)

COURSES

University College London
Supervised Learning, Graphical Models, Advanced Topics in Machine Learning, MRes Computational Statistics and Machine Learning Dissertation, Investigating Research, Research Professional Development

University of St Andrews
Computer Science, Internet Programming, Mathematics, Psychology, Reasoning and Knowledge, Foundations of Computation, Advanced Computer Science, Software Engineering, Computational Complexity, Major Software Team Project, Operating Systems, Artificial Intelligence, Human Computer Interaction, Component Technology, Logic and Software Verification, Computer Graphics, Multimedia, Constraint Programming, Artificial Intelligence Practice, Human Computer Interaction Practice, Major Software Project

Other Activities

Treasurer, University of St Andrews Computing Society, UK	2014 – 2015
Secretary, University of St Andrews Psychology Society, UK	2013 – 2014
Events Coordinator, University of St Andrews Psychology Society, UK	2012 – 2013
First-Year Rep, University of St Andrews Breakaway Society, UK	2011 – 2011