Chi-Hsien (Eric) Yen

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EDUCATION

University of Illinois at Urbana-Champaign, *Ph.D. Candidate in Computer Science* *08/2014-present*
- Advisor: Dr. Wai-Tat Fu
- GPA: ***3.96/4.0***

National Taiwan University, *B.S. in Electrical Engineering* *09/2009-06/2013*
- GPA: ***3.97/4.0 (overall)***, Class Ranking: ***15/204 (7%)***
- ***Cloud Computing Program***

RESEARCH EXPERIENCE

Graduate Researcher, *Cascade Lab, UIUC* 08/*2014-present*

Research on human-computer interaction, data visualization, and cognitive science
Advisor: Dr. Wai-Tat Fu

- **Design an Intelligent Visual Analytics System:**
  - Conduct in-lab user studies to investigate the patterns in human visual analytics reasoning process
  - Implement a web-based visual analytics system to reduce cognitive bias and mistakes by integrating an interactive data attribute graph in the interface

- **Design a Smart Crowdfunding Platform:**
  - Implemented a crowdfunding platform to increase the overall campaign success rate by designing a new donating mechanism and a donation distributing algorithm
  - Conducted user studies to demonstrate the improved success rate in the platform and the more desirable attributes in donor behavior

Undergraduate Researcher, *Ubicomp Lab, NTU* 01/2013-07/2014

Research on ubiquitous computing and human-computer interaction
Advisor: Dr. Hao-Hua Chu

- **SoberDiary:**
  - Collaborated with a team of researchers, therapists, and designers to develop a phone-based system to help alcohol dependent patients maintain sobriety
  - Visualized collected log data to facilitate real time monitoring and data analyzing
  - Conducted field studies and interviews with patients to understand real usability of the system

- **BioScope:**
  - Designed BioScope, a bandage-like extensible sensing system, to assist caregivers in collecting numerous crucial bio-signals, such as ECG, temperature, movements, and sounds
  - Utilized 3D printing with flexible materials for fast prototyping of the bandage

Undergraduate Researcher, *Next Generation Wireless Networking Lab, NTU* 08/*2011-12/2013*

Research on wireless networking
Advisor: Dr. Chun-Ting Chou

- **Design of Wireless Communication Protocol:**
  - Designed an adaptive multi-channel wireless communication protocol for ad-hoc networks to optimize channel utilization by real-time estimating the number of active devices and automatic parameter adjusting

- **Hidden Node Problem in Distributed Networks:**
  - Extended the above protocol to avoid hidden node problem and exploit hidden nodes for better spatial reuse
  - Implemented simulations in C++ to demonstrate the improved performance and feasibility of the protocol

PROFESSIONAL EXPERIENCE

Research and Development Intern, *Trend Micro Inc., Taipei, Taiwan* *02/2012-08/2012*
- Inspected packets of specific applications and identified them by extracting special features
- Developed a software tool that automatically analyzes huge packet flows and suggests possible features based on packet lengths using clustering algorithms

PUBLICATIONS

Journal Paper

[1] ***Chi-Hsien Yen***, Chen-Yu Hsu, and Chun-Ting Chou, "An Adaptive Multichannel Protocol for Large-Scale Machine-to-Machine (M2M) Networks," Wireless Communications and Mobile Computing 15.6 (2015): 1015-1025.

Conference Paper

[2] ***Chi-Hsien Yen****, Lee, Yi-Chieh*, and Wai-Tat Fu, "Improving Donation Distribution for Crowdfunding: An Agent-Based Model." in *Proceedings* of the 2016 International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction, DC, USA, June 2016. [*co-first authors]

[3] Cheng-Yuan Li, ***Chi-Hsien Yen***, Kuo-Cheng Wang, Chuang-Wen You, Seng-Yong Lau, Cheryl Chia-Hui Chen, Polly Huang, Hao-Hua Chu, "BioScope: an extensible bandage system for facilitating data collection in nursing assessments," in *Proceeding* of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing, (Ubicomp'2014), Seattle, USA, September 2014.

[4] Kuo-Cheng Wang, Yi-Hsuan Hsieh, ***Chi-Hsien Yen***, Chuang-Wen You, Ming-Chyi Huang, Chao-Hui Lee, Seng-Yong Lau, Hsin-Liu (Cindy) Kao, Hao-Hua Chu, Ming-Syan Chen, "SoberDiary: A Phone-based Support System for Assisting Recovery from Alcohol Dependence," in *Proceeding* of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjuct Publication, (Ubicomp'2014 Adjunct), Seattle, USA, September 2014.

[5] Chen-Yu Hsu, ***Chi-Hsien Yen***, and Chun-Ting Chou, "An Adaptive Multichannel Protocol for Large-Scale Machine-to-Machine (M2M) Networks," in *Proceeding* of the 9th International Wireless Communications and Mobile Computing Conference (IWCMC'2013), Sardinia, Italy 2013.

[6] ***Chi-Hsien Yen****, Chen-Yu Hsu*, Wei-Chiu Ma*, and Shao-Yi Chien, "TDTOS – T-shirt Design and Try-On System," 1st Asia-Pacific Workshop on FPGA Applications, 2013. [*co-first authors]

HONORS & AWARDS

First Prize, *NASA JPL Team Space Design Competition, UIUC* *2015*

Studying Abroad Scholarship, *Ministry of Education, Taiwan* *2014-2015*

Computer Science Excellence Fellowship, *Computer Science Department, UIUC* *2014*

Third Prize, *NTUEE Undergraduate Outstanding Reports of Special Projects* *2013*

Gold Medal Award, *Innovative Asia Altera Design Contest 2012, Xiamen* *2012*

- First prize among 412 teams from Taiwan and China in the most prestigious FPGA design competition
- Prizewinning project "T-shirt Design and Try-On System": an FPGA application that simulates T-shirt try-on result vividly in real-time. Users could also design their own T-shirts and try them on immediately.

Presidential Award (awarded to top 5% students), *Department of Electrical Engineering, NTU* *2009-2011*

Pan Wen Yuan Foundation Scholarship, *Department of Electrical Engineering, NTU* *2011*

PROFESSIONAL SKILLS

Research Skills:
Data Collection: web crawling, crowdsourcing, interview design, survey design, experimental design
Data Analysis: Statistical analysis, qualitative data analysis
Technical Skills:
Front-end: **JavaScript, HTML, CSS**
Back-end: **Python, PHP, MySQL**
Implementation/Analysis: **C/C++, MATLAB,** R, Java