

Hoang Truong

Mobile Communication, Wireless Sensing, mHealth

<http://mnslab.org/hoangtruong/>
hoang.truong@colorado.edu
+1-720-345-2243

EDUCATION

University of Colorado Boulder <i>Ph.D., Computer Science, advised by Prof. Tam Vu</i>	USA 2017 – Present
Korea Advanced Institute of Science and Technology - KAIST <i>Master of Science, Computer Science</i>	Republic of Korea 2012 – 2014
Korea Advanced Institute of Science and Technology - KAIST <i>Bachelor of Science, Cum Laude in Electrical and Electronic Engineering</i>	Republic of Korea 2008 – 2012

RESEARCH EXPERIENCE

Mobile and Networked Systems Lab <i>Graduate Research Assistant</i> Projects: Capacitive Touch Communication, Drone Detection System, Battery-free Gesture Recognition System, Mobile Respiration System	CU Boulder, USA Jan. 2017 – Present
Data Engineering and Applications Lab <i>Graduate Research Assistant</i> Projects: Cognitive Radio Network, SHCS-MAC, SDR Platform	KAIST, Korea Sep. 2012 – Nov. 2014
Storage, Communications & Machine Learning Lab <i>Undergraduate Graduation Research</i> Project: BCJR Algorithm and Applications	KAIST, Korea Feb. 2012 – May. 2012
Smart Sensor Architecture Lab <i>Internship</i> Project: Compressive Sensing for Smart Camera System	KAIST, Korea Jul. 2011 – Sep. 2011
KAIST Undergraduate Research Program <i>Research Fellow</i> Project: Error Correcting Code for Hologram ID Tags	KAIST, Korea Dec. 2010 – May. 2011
Convergence Opto-Electronic Device Lab <i>Part-time Researcher</i> Project: Image Processing for Hologram ID Tags	KAIST, Korea Aug. 2010 – May. 2011

INDUSTRY EXPERIENCE

HUMAX Digital Co., Ltd <i>Software Engineer/Android Junior Team Manager</i>	Korea Jan. 2015 – Jan. 2017
KAIST Startup Program <i>Software Developer</i>	KAIST, Korea May. 2014 – Nov. 2014
FPT Software Lab <i>Software Developer</i>	FPT, Vietnam June. 2012 – Aug. 2012
Distributed & Outsourced Software Engineering <i>Participant</i>	ETH Zurich, Switzerland Sep. 2010 – Dec. 2010

TEACHING EXPERIENCE

University of Colorado Boulder <i>TA for Computer System</i>	CU Boulder, USA 2018 Spring/Fall
University of Colorado Denver <i>TA for Logic Design, Embedded System Programming</i>	CU Denver, USA 2017 Fall
KAIST Tutoring Program <i>Tutor for Calculus I/II, Physics I, Chemistry I, and Introduction to Programming</i>	KAIST, Korea 2012 – 2014

FIELD EXPERIENCE

Nippon Telegraph And Telephone West Corporation (NTT West)

Field support: Integration of HB-2000

Fukuoka, Japan

Oct. 2016 – Nov. 2016

Korea Defense Technology Exhibition

Demo: SDR Platform and SHCS-MAC

KINTEX, Korea

May. 2014

19th CJK Workshop, Auto-ID Labs

Presentation: SHCS-MAC for CR Network Implementation

Seoul, Korea

Nov. 2013

18th CJK Workshop, Auto-ID Labs

Presentation: SDR Platform with ARM-based Processor

Tokyo, Japan

May. 2013

PUBLICATIONS

1. “CapBand: Battery-free Successive Capacitance Sensing Wristband for Hand Gesture Recognition”
H. Truong, S. Zhang, U. Muncuk, P. Nguyen, N. Bui, A. Nguyen, Q. Lv, K. Chowdhury, T. Dinh, T. Vu
The ACM Conference on Embedded Networked Sensor Systems (**ACM SenSys**) 2018
(Acceptance rate: 15.6%)
2. “Body-Guided Communications: A Low-Power, Highly-Confined Primitive to Track and Secure Every Touch”
V. Nguyen, M. Ibrahim, H. Truong, P. Nguyen, R. Howard, T. Vu, and M. Gruteser
The ACM International Conference on Mobile Computing and Networking (**ACM MobiCom**) 2018
(Acceptance rate: 22.5%)
3. “TYTH-Typing On Your Teeth: Tongue-Teeth Localization for Human-Computer Interface”
P. Nguyen, N. Bui, A. Nguyen, H. Truong, A. Suresh, M. Whitlock, D. Pham, T. Dinh, and T. Vu
ACM International Conference on Mobile Systems, Applications and Services (**ACM MobiSys**) 2018
(Acceptance rate: 26.8%)
4. “Cost-Effective and Passive RF-Based Drone Presence Detection and Characterization”
Phuc Nguyen, Hoang Truong, Mahesh Ravindranathan, Anh Nguyen, Richard Han, and Tam Vu
ACM Mobile Computing and Communications Review (**ACM GetMobile**) 2018
5. “Smartphone based Blood Oxygen Level Measurement Systems using Near-IR and RED Wave-guided Light”
N. Bui, A. Nguyen, P. Nguyen, H. Truong, A. Ashok, T. Dinh, R. Deterding, and T. Vu
The ACM Conference on Embedded Networked Sensor Systems (**ACM SenSys**) 2017
(Acceptance rate: 14.3%) - **BEST PAPER AWARD NOMINEE**
6. “Matthan: Drone Presence Detection Using Physical Signatures in the Drone’s RF Communication”
Phuc Nguyen, Hoang Truong, Mahesh Ravindranathan, Anh Nguyen, Richard Han, and Tam Vu
ACM International Conference on Mobile Systems, Applications and Services (**ACM MobiSys**) 2017
(Acceptance rate: 18%) - **ACM SIGMOBILE Research Highlight 2017**
7. “Photometry based Blood Oxygen Estimation through Smartphone Cameras”
N. Bui, A. Nguyen, P. Nguyen, H. Truong, A. Ashok, T. Dinh, R. Deterding, and T. Vu
ACM MobiCom-S3 2017 - BEST PAPER AWARD
8. “Through-body Capacitive Touch Communication”
H. Truong, P. Nguyen, V. Nguyen, M. Ibrahim, R. Howard, T. Vu, and M. Gruteser
ACM MobiCom-S3 2017
9. “DEMO: Low-power Capacitive Sensing Wristband for Hand Gesture Recognition”
Hoang Truong, Phuc Nguyen, Anh Nguyen, Nam Bui, and Tam Vu
ACM MobiCom-S3 2017
10. “Capacitive sensing 3D-printed Wristband for Enriched Hand Gesture Recognition”
Hoang Truong, Phuc Nguyen, Anh Nguyen, Nam Bui, and Tam Vu
ACM MobiSys 2017 - WearSys workshop

PATENTS

- “Drone Presence Detection”, App. No. 62/516,875, CU4333D-PPA1, 2017.
Tam Vu, Richard Han, Phuc Nguyen, Hoang Truong, Mahesh Kumar Ravindranathan

HONORS AND AWARDS

- NSF Travel Grant Award, ACM SenSys 2018 **2018**
- ACM SIGMOBILE Research Highlights **2017**
- Best Paper Award Nominee, ACM SenSys 2017 **2017**
- Best Paper Award, ACM MobiCom-S3 2017 **2017**
- 2nd place, App Contest, ACM MobiCom 2017 **2017**
- NSF Travel Grant Award, ACM MobiCom 2017 **2017**
- 3rd place, KAIST Hackathon **2014**
- Best Questioner, 18th CJK Workshop **2013**
- KAIST Graduate Scholarship **2012 - 2014**
- KAIST Undergraduate Research Program (URP) **2011**
- Outstanding Technical Poster, Freshmen Design **2009**
- KAIST Undergraduate Scholarship **2008 - 2012**