Nhat (Nick) Pham, M.Sc.

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Research Interests Cyber-Physical Systems, Mobile Healthcare, Operating Systems, Cognitive Radio Networks, and Wireless Sensor Networks.

Education

DPhil (Ph.D.) student in Computer Science,
University of Oxford, United Kingdom
Advisor: Prof. Tam Vu
Starting year: 2020

M.Sc. in Computer Science,
Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea
Advisor: Prof. Daeyoung Kim
Graduation year: 2018

B.E. in Computer Engineering
Vietnam National University-University of Technology (HCMUT), Ho Chi Minh city, Vietnam
Advisor: Dr. Anh Pham and M.E. Hieu Bui
Graduation year: 2015
Honor Program, Ranking: 2/233, GPA: 8.95/10

Awards

ACM SIGMOBILE Research Highlight 2020	2020
University of Oxford DPhil Scholarship	2020-2023
Best Paper Award, ACM MobiCom 2019	2019
KAIST Graduate Scholarship, KAIST, South Korea	2016-2018
Silver graduation medal, HCMUT, Vietnam.	2015
HCMUT Excellence Scholarship, HCMUT, Vietnam.	2011-2015
Odon Vallet's Fellowship, Ho Chi Minh City, Vietnam.	2011
Odon Vallet's Fellowship, Thua Thien Hue, Vietnam.	2009-2010

Publications

■ *Conferences, Workshops and Demos*

1. DroneScale: Drone Load Estimation Via Remote Passive RF Sensing.
   Phuc Nguyen, Vimal Kakaraparthi, Nam Bui, Nikshep Umamahesh, **Nhat Pham**, Hoang Truong, Yeswanth Guddeti, Dinesh Bharadia, Eric Frew, Richard Han, Daniel Massey, Tam Vu.
   ACM SenSys'20 - The 18th ACM Intl' Conf. on Embedded Networked Sensor Systems.
   (Conditionally accepted, 44 out of 213 submissions, acceptance ratio: 20.7%).
2. WAKE: A Behind-the-ear Wearable System for Microsleep Detection.
   Nhat Pham, Tuan Dinh, Zohreh Raghebi, Taeho Kim, Nam Bui, Phuc Nguyen, Hoang Truong, Farnoush Banaei-Kashani, Ann Halbower, Thang Dinh, and Tam Vu.
   ACM MobiSys'20 - The 18th ACM Intl' Conf. on Mobile Systems, Applications, and Services.
   (34 out of 175 submissions, acceptance ratio: 19.4%).
3. Painometry: Wearable and Objective Quantification System for Acute Postoperative Pain.
   H. Truong, N. Bui, Z. Raghebi, M. Ceko, **N. Pham**, P. Nguyen, A. Nguyen, T. Kim, K. Siegfried, E. Stene, T. Tvrdy, L. Weinman, T. Payne, D. Burke, T. Dinh, S. D'Mello, F. Banaei-Kashani, T. Wager, P. Goldstein, and T. Vu.
   ACM MobiSys'20 - The 18th ACM Intl' Conf. on Mobile Systems, Applications, and Services.
   (34 out of 175 submissions, acceptance ratio: 19.4%).
4. eBP: A Wearable System For Frequent and Comfortable Blood Pressure Monitoring.
   Nam Bui, **Nhat Pham**, Jessica Barnitz, Phuc Nguyen, Hoang Truong, Taeho Kim, Anh Nguyen, Zhanan Zou, Nicholas Farrow, J. Xiao, Robin Deterding, Thang Dinh and Tam Vu.
   ACM MobiCom'19 - The 25th ACM Intl' Conf. on Mobile Computing and Networking.
   (30 out of 186 submissions, acceptance ratio: 16.1%). **Best Paper Award, Research Highlight.**
5. Demo: Earable - An Ear-Worn Biosignal Sensing Platform for Cognitive State Monitoring and Human-Computer Interaction.

Nhat Pham, Taeho Kim, Frederick M Thayer, Anh Nguyen, and Tam Vu.
ACM MobiSys'19 - The 17th ACM Intl' Conf. on Mobile Systems, Applications, and Services.

6. MSHCS-MAC: A MAC protocol for Multi-hop cognitive radio networks based on Slow Hopping and Cooperative Sensing approach.
Nhat Pham, Kiwoong Kwon, and Daeyoung Kim.
ISCC'18 - The 23th IEEE Symposium on Computers and Communications, Brazil, June 2018.
7. Oliot-OpenCity: Open Standard Interoperable Smart City Platform.
Yalew Tolcha, Minh Nguyen, Jawook Byun, Kiwoong Kwon, Jiyong Han, Wondeuk Yoon, Nakyung Lee, Hyunseob Kim, **Nhat Pham**, and Daeyoung Kim.
ISC2'18 - IEEE Intl' Smart Cities Conference, Kansas City, Missouri, USA, Sep. 2018
8. GS1 Global Smart Parking System: One Architecture to Unify Them All (Short paper).
Nhat Pham, Muhammad Hassan, Hoang Minh Nguyen and Daeyoung Kim.
IEEE SCC'17 - The 14th IEEE Intl' Conf. on Services Computing, Hawaii, USA, Jun. 2017.
9. IsV2C: An Integrated Road Traffic-Network-Cloud Simulator for V2C Connected Car Services.
Heejae Kim, Jiyong Han, Seonghwan Kim, Jisoo Choi, Dongsik Yoon, Minsu Jeon, Eunjoo Yang, **Nhat Pham**, Sungpil Woo, Daeyoung Kim and Chan-Hyun Youn.
IEEE SCC'17 - The 14th IEEE Intl' Conf. on Services Computing, Hawaii, USA, Jun. 2017.
10. GS1 Global Smart Parking System: Integrated architecture that provides interoperability of global systems.
Nhat Pham, Sungpil Woo, Muhammad Hassan, Hoang Minh Nguyen and Daeyoung Kim.
KCC'17 - Korea Computer Congress, Jeju, Korea, Jul. 2017.
11. Towards an Open Framework for Home Automation Development.
Dang-Nhat Pham-Huu, Van-Hien Nguyen, Van-Anh Trinh, Van-Hieu Bui, and Hoang-Anh Pham.
ACOMP'15 - The 9th Intl' Conf. on Advanced Computing and Applications., Ho Chi Minh City, Vietnam, Nov. 2015.

■ *Journals and Magazines*

12. eBP: Frequent and comfortable blood pressure monitoring from inside human's ears.
Nam Bui, **Nhat Pham**, Hoang Truong, Phuc Nguyen, J. Xiao, Robin Deterding, and Tam Vu.
ACM GetMobile'20 - Mobile Computing and Communications. **(Research Highlight)**
13. MSHCS-MAC: A MAC for Multi-hop Cognitive Radio Networks Based on Slow Hopping and Cooperative Sensing Approach with Time Synchronization.
Won-Deuk Yoon, **Nhat Pham**, Ki-Woong Kwon, Jang-Gwan Im, Dae-Young Kim
KICS'18 - The Journal of Korean Institute of Communications and Information Sciences.
14. Epileptic Seizure Detection and Experimental Treatment: A Review.
Taeho Kim, Phuc Nguyen, **Nhat Pham**, Nam Bui, Hoang Truong, Sangtae Ha, Tam Vu
Frontiers in Neurology, July 2020.

Patents

■ *International Patents*

1. Tam Vu, Robin Deterding, Ann Halbower, Farnoush Banaei-Kashani, **Nhat Pham**, and Nam Bui, "A Wearable System for Behind-the-Ear Sensing and Stimulation", PCT/US2020/031712.
2. Tam Vu, Robin Deterding, Nam Bui, and **Nhat Pham**, "Health Sticker: A Modular Adhesive Platform Monitoring Vital Signals", PCT/US2020/015961.

■ *Provisional Applications*

3. Tam Vu, Robin Deterding, Farnoush Banaei-Kashani, **Nhat Pham**, and Nam Bui, "A Wearable System for Intra-Ear Sensing and Stimulating", Provisional Application No.: 62/900,187.
4. Tam Vu, Robin Deterding, Nam Bui, and **Nhat Pham**, "eBP: A Wearable System For Frequent and Comfortable Blood Pressure Monitoring From Users Ear", Provisional Application No.: 62/900,182.
5. Tam Vu, Robin Deterding, Nam Bui, and **Nhat Pham**, "Breathing Gripper: A Miniature Breath Monitoring Device", Provisional Application No.: 62/968,369.

Experience

■ *Research Experience*

- **Graduate Research Assistant**, University of Colorado Boulder, USA. 2018-2020
- **Researcher**, Real-time and embedded systems lab, KAIST. 2018

■ *Teaching Experience*

- **Data and computer communication**, HCMUT. Fall 2015
- **Embedded systems**, HCMUT. Spring 2015

■ *Work Experience*

- **Embedded Software Engineer**, FPT Software, Ho Chi Minh City, Vietnam. 2015
- **Embedded Software Intern**, Applied Micro Circuits Corporation, Ho Chi Minh City, Vietnam. 2014
- **Kernel Maintainer**, RIOT-OS (The friendly Operating System for the Internet of Things). 2014-2015
- **Student participant**, 2014 Intel Cup Undergraduate Electronic Design Contest, Shanghai Jiao Tong University, Shanghai, China. 2014

Computer Skills

Programming languages, C/C++, Matlab, Python, Verilog, Java, Android, Bash, Makefile, Java Script, GNU linker script.
Hardware Platform, Software defined radios (USRP, bladeRF), Micro-controllers (ARM Cortex, MSP430, PIC, 8051, MIPS, Intel Atom), and FPGAs.
Operating systems, Linux, Android, Windows, TI-RTOS, freeRTOS, RIOT-OS, Contiki.
Software, Altium (PCB design), GNU Radio, openOCD, GDB, MATLAB.
Version Control, Git, Perforce.

Languages

English

- **TOEFL-iBT**, Total: 105, Reading: 30, Listening: 29, Speaking: 20, Writing: 26. 2018
- **GRE**, Total: 314, Quantitative: 164, Verbal: 150. 2017

Vietnamese, Mother tongue.

Reference

Prof. **Tam Vu**, Department of Computer Science, University of Oxford, UK.
Prof. **Daeyoung Kim**, School of Computing, KAIST, South Korea.
Prof. **Phuc Nguyen**, Department of Computer Science and Engineering, University of Texas at Arlington, USA.
Dr. **Anh Pham**, Faculty of Computer Science and Engineering, HCMUT, Vietnam.
M.E. **Hieu Bui**, Faculty of Computer Science and Engineering, HCMUT, Vietnam.