

Nhat Pham

Curriculum Vitae

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Education

- Fall 2018 – present **PhD student in Computer Science**, *University of Colorado Boulder (CU Boulder)*, Colorado, USA.
- 2016 – 2018 **MSc in Computer Science**, *Korea Advanced Institute of Science and Technology (KAIST)*, Daejeon, South Korea, *Overall GPA: 3.71/4.3*.
- 2010 – 2015 **BEng in Computer Engineering**, *Vietnam National University - Ho Chi Minh city University of Technology (HCMUT)*, Ho Chi Minh city, Vietnam, *Overall GPA: 8.95/10, Ranking: 2/233, Honor program*.

Masters Thesis

- Title *MSHCS-MAC: A MAC Protocol for Multihop Cognitive Radio Networks based on Slow Hopping and Cooperative Sensing approach*
- Supervisors Professor Daeyoung Kim
- Description Based on a proposed approach with Slow Hopping and Cooperative Sensing, this thesis develops a MAC (Media Access Control) protocol for multi-hop cognitive radio networks. Implementation and evaluation have been done on real mobile devices by using GNURadio and USRPs.

Bachelor Thesis

- Title *Building Home Automation system based on 6LoWPAN*
Grade: 10/10
- Supervisors Dr. Anh Pham and Mr. Hieu Bui
- Description This thesis implements a home automation system based on 6LoWPAN network stack of RIOT-OS. The system has the ability to operate automatically based on user-defined scenarios. A generic device drivers model is proposed so new sensors can be configured on-the-fly without modifying controller's firmware. An Android app is also implemented to control devices, setup scenarios in our system by using Bluetooth Low Energy protocol.

Experience

- Mar. 2016 – Jul. 2018 **Research Assistant**, REAL-TIME AND EMBEDDED SYSTEMS LAB (RESL), KAIST, South Korea.
My research at RESL includes: developing MAC layer and time synchronization protocols for multi-hop cognitive radio networks, implementing IPv6 connectivity for our SNAIL (Sensor Networks for All-IP World) Gateway, and designing a GS1-based global smart parking systems.
- Mar. 2015 – May 2015 **Embedded Software Engineer**, FPT SOFTWARE - HO CHI MINH CITY, Ho Chi Minh city, Vietnam.
- Jul. 2014 – Sept. 2014 **Embedded Software Intern**, APPLIED MICRO CIRCUITS CORPORATION VIETNAM, Ho Chi Minh city, Vietnam.

- Sept. 2014 – **Maintainer**, RIOT-OS (THE FRIENDLY OPERATING SYSTEM FOR THE INTERNET OF THINGS).
 Jun. 2015 RIOT-OS is started by Freie Universitat Berlin, INRIA, and Hamburg University of Applied Sciences as an open source project.
- Jul. 2014 – **Student participant**, 2014 INTEL CUP UNDERGRADUATE ELECTRONIC DESIGN CONTEST, Shanghai Jiao Tong University, Shanghai, China.
 Sept. 2014 Our project was a remote blood pressure and heart rate monitoring system.

Teaching

- Spring 2015 **Teaching assistant**, EMBEDDED SYSTEMS, HCMUT, Vietnam.
 Fall 2015 **Teaching assistant**, DATA AND COMPUTER COMMUNICATION, HCMUT, Vietnam.

Awards

- Apr. 2015 **Silver graduation medal**, HCMUT, Ho Chi Minh city, Vietnam.
 This award was given to the second-best student in the faculty of Computer Science and Engineering at HCMUT.
- 2011 **Odon Vallet's fellowship**, Ho Chi Minh city, Vietnam.
 This award was given to excellent college students in Ho Chi Minh City and other cities in southern part of Vietnam.
- 2009, 2010 **Odon Vallet's fellowship**, Thua Thien Hue, Vietnam.
 This award was given to excellent high school students in Thua Thien Hue province.

Publications

International conferences

- [1] **Nhat Pham**, Kiwoong Kwon, and Daeyoung Kim, "MSHCS-MAC: A MAC protocol for Multi-hop cognitive radio networks based on Slow Hopping and Cooperative Sensing approach", 23th IEEE Symposium on Computers and Communications (ISCC 2018), Natal, Brazil, June 25-28, 2018.
- [2] Yalaw k. Tolcha, Hoang Minh Nguyen, Jawook Byun, Kiwoong Kwon, Jiyong Han, Wondeuk Yoon, Nakyung Lee, Hyunseob Kim, **Nhat Pham**, and Daeyoung Kim, "Oliot-OpenCity: Open Standard Interoperable Smart City Platform", 2018 IEEE International Smart Cities Conference (ISC2), September 16-19, 2018, Kansas City, Missouri, USA.
- [3] **Nhat Pham**, Muhammad Hassan, Hoang Minh Nguyen and Daeyoung Kim, "GS1 Global Smart Parking System: One Architecture to Unify Them All", 14th IEEE International Conference on Services Computing (SCC 2017), June 25-30, 2017, Honolulu, Hawaii, USA. *[Short paper]*
- [4] Heejae Kim, Jiyong Han, Seonghwan Kim, Jisoo Choi, Dongsik Yoon, Minsu Jeon, Eunjoo Yang, **Nhat Pham**, Sungpil Woo, Daeyoung Kim and Chan-Hyun Youn, "IsV2C: An Integrated Road Traffic-Network-Cloud Simulator for V2C Connected Car Services", 14th IEEE International Conference on Services Computing (SCC 2017), June 25-30, 2017, Honolulu, Hawaii, USA.
- [5] **Dang-Nhat Pham-Huu**, Van-Hien Nguyen, Van-Anh Trinh, Van-Hieu Bui, and Hoang-Anh Pham: "Towards an Open Framework for Home Automation Development". 9th International Conference on Advanced Computing and Applications (ACOMP 2015). November 23-25, 2015, Ho Chi Minh city, Vietnam.

Domestic conferences

- [6] **Nhat Pham**, Sungpil Woo, Muhammad Hassan, Hoang Minh Nguyen and Daeyoung Kim, "GS1 Global Smart Parking System: Integrated architecture that provides interoperability of global systems", Korea Computer Congress 2017 (KCC 2017), July, 2017, Jeju, Korea.

Computer Skills

The one which I have more experiences is listed first

Programming languages	C/C++, VERILOG, JAVA, ANDROID, BASH, MAKEFILE, GNU LINKER SCRIPT
Version control	GIT, PERFORCE
IDE	ECLIPSE, TI CCS, ANDROID STUDIO
Hardware platforms	SOFTWARE DEFINED RADIOS (USRP, BLADERF), MICRO-CONTROLLERS (ARM CORTEX, PIC, 8051, MIPS, INTEL ATOM), AND FPGAs
Operating systems	LINUX, ANDROID, WINDOWS, FREERTOS, RIOT-OS, CONTIKI
Software	ALTIUM (PCB DESIGN), GNU RADIO, OPENOCD, GDB, MATLAB

Communication Skills

- 2018 Oral presentation at 23th IEEE Symposium on Computers and Communications, Natal, Brazil
- 2017 Oral presentation at 14th IEEE International Conference on Services Computing, Hawaii, USA
- 2015 Oral presentation at 9th International Conference on Advanced Computing and Applications, Ho Chi Minh city, Vietnam
- 2014 Oral presentation at 2014 Intel Cup Undergraduate Electronic Design Contest, Shanghai, China

Languages

Vietnamese **Mother tongue**

English **Good at Reading, Listening and Writing, Fair speaking skill**

- **TOEFL-iBT**: Reading: 30, Listening: 29, Speaking: 20, Writing: 26, Total: 105, Taken on July 14, 2018
- **GRE**: Verbal: 150, Quantitative: 164, Writing: 3, Taken on Dec, 2017

About me

In research, I'm passionate about computer hardware, wireless networks and open-source projects (which is reflected in my skills and experiences ;)). I do enjoy DIY works, tinkering with things around me, and fixing broken stuffs.

Besides, I like reading books (I'm a fan of history books and novels) and watching sci-fi and thriller movies in my free time. During weekends, I enjoy playing futsal with my friends (Not a bad goalie, I am ;)). We even participate futsal tournaments in KAIST sometimes.

References

Academic advisors

CU Boulder **Prof. Tam Vu**

Assistant Professor of Computer Science department

Director of Mobile and Networked Systems (MNS) Laboratory.

Email: tam.vu@colorado.edu

KAIST **Prof. Daeyoung Kim**

Professor of School of Computing

Director of Real-time and Embedded Systems lab and Auto-ID lab.

Email: kimd@kaist.ac.kr

HCMUT **Dr. Anh Pham**

Lecturer of Faculty of Computer Science and Engineering

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HCMUT **Mr. Hieu Bui (MEng)**

Lecturer of Faculty of Computer Science and Engineering

Email: bvhieu@hcmut.edu.vn