NHAN H. PHAM

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EDUCATION

2017-present — **PhD in Operations Research**
University of North Carolina at Chapel Hill (UNC) · Chapel Hill, NC

2015-2017 — **Graduate Study in Computer Engineering**
University of Nevada, Reno (UNR) · Reno, NV

2008-2013 — **Bachelor of Engineering, Computer Engineering – Honor Program**
Bach Khoa University – Vietnam National University (BKU) · Ho Chi Minh City, Vietnam

EXPERIENCES

2017-present — **Graduate Teaching Assistant**
- **STOR 113: Decision Models for Business and Economics (Prof. Nilay Argon) · Fall 2017**

Department of Statistics and Operations Research
University of North Carolina at Chapel Hill · Chapel Hill, NC

2015-2017 — **Graduate Teaching Assistant**
- **CPE 301: Embedded Systems Design (Prof. Dwight Egbert) · Fall 2016, Spring 2017**
- **CS 302: Data Structures (Prof. Michael Leverington) · Fall 2015, Spring 2016**

Department of Computer Science & Engineering
University of Nevada, Reno · Reno, NV

2013-2015 — **Lab Assistant · Renesas SuperH Lab**
Department of Computer Science & Engineering
Bach Khoa University – Vietnam National University · Ho Chi Minh City, Vietnam

2012 — **Embedded Software Engineering Intern**
Applied Micro Circuits Corporation · Ho Chi Minh City, Vietnam

PUBLICATIONS

2016 — **N. H. Pham**, H. M. La, T. H. Dinh, and Q. P. Ha. Automated Robotic Monitoring and Inspection of Steel Structures and Bridges. **Robotica**, Sept. 2016 (Submitted, under revision)

N. H. Pham and H. M. La. Design and Implementation of an Autonomous Robot for Steel Bridge Inspection. In Proceedings of the **54th Annual Allerton Conference on Communication, Control, and Computing**, pages 1-8, Sept. 27-30, 2016, Urbana-Champaign, Illinois, USA.

N. H. Pham, H. M. La, Q. P. Ha, S. N. Dang, A. H. Vo and Q. H. Dinh, "Visual and 3D Mapping for Steel Bridge Inspection Using a Climbing Robot," **The 33rd International Symposium on Automation and Robotics in Construction and Mining (ISARC)**, pages 1-8, July 18-21, 2016, Auburn, Alabama, USA.

2013 — The-Duy Phan Dinh, **Nhan H. Pham**, Khoi-Nguyen Le-Huu and Anh-Vu Dinh Duc, "Quadrotor Helicopter: A Practical Design Approach," **IEICE International Conference on Integrated Circuits, Design and Verification**, pp.156-163, 2013, Ho Chi Minh, Vietnam.

RESEARCH PROJECTS

2015-2017 — **Building a Steel Climbing Robot for Steel Bridges Inspection**
Joint worked with Dr. Hung La, UNR, Luan V. Nguyen, UNR, Tuan-Dung Le, UNR and Jesus Sanchez, UNR.
The robot contains four wheels with permanent magnets inside that is able to adhere to steel surface without providing power. Cameras, 3d sensor and non-destructive testing (NDT) sensors can be integrated for localization, map construction as well as bridge condition assessment.

2015

NSF Innovation Corps (I-CorpsTM) Program
Joint worked with Dr. Hung La (Principle Investigator – PI), UNR, Mr. Edward Little (Industrial Mentor – IM), FiberMatrix Inc.
I was the Entrepreneurial Lead (EL) of the "Automatic Infrastructure Inspection" team attending the program held in Michigan whose primary goal was to foster entrepreneurship that would lead to the commercialization of technology previously supported by NSF-funded research. The team has completed 100 customer interviews in order to validate the commercial opportunity of combining drones and robots for bridges inspections. We finally came to a "Go" decision – form a startup business for our product.

2013-2015

Building a Quadrotor helicopter with Fully Automatic Controlled
Joint worked with Dr. Vu A. D. Dinh, University of Information Technology – VNU HCM (UIT – VNU HCM) and Duy T. D. Phan, BKU.
This drone can support automatic flying functions such as auto take-off and landing, way-point navigation with the aid of GPS as well as collecting images captured from a mini camera. I was responsible for the sensor fusion, transmission between drone and ground station and field test.

2013

Building a Service Calling System
Joint worked with Duy T. D. Phan, BKU, and Bach X. D. Nguyen, BKU.
A system helps patient to alert nurses whenever they need services. It flashes the light outside the room as well as beeps the buzzers when the button inside the room is pressed. The system can support up to 20 rooms.

SKILLS & QUALIFICATIONS

Programming Languages
C/C++, Python, Matlab

Software
Matlab, Microsoft Office, Adobe Premiere Pro

Robotics
Robot Operating System (ROS), OpenCV, PointCloud

Skills
Robotics: hardware development, sensor integration (mono/stereo camera, IR, Sonar, Laser), SLAM, 3D Mapping
PCB design, soldering, circuit analysis and debugging
Machine shop skills: milling, drilling

HONORS & AWARDS

2016-2017

Graduate Access Grant · Regents' Higher Education Opportunity Award
University of Nevada, Reno · Reno, NV

International Graduate Student Award · Regents' Higher Education Opportunity Award
University of Nevada, Reno · Reno, NV

2016

Poster Exhibition – First Place Winner
CSE Graduate Club – Department of Computer Science & Engineering
University of Nevada, Reno · Reno, NV

2008-2013

Outstanding Academic Student Scholarship
Department of Computer Science & Engineering
Bach Khoa University – Vietnam National University · Ho Chi Minh City, Vietnam

2012

Sunflower Mission Electronic & Telecom Scholarship
eSilicon Vietnam · Ho Chi Minh City, Vietnam

OTHER EXPERIENCES

2017 **2017 Nevada State Science Olympiad Judge**
University of Nevada, Reno · Reno, NV

2014 **Organizing Assistant**
BKIT Car Rally · Ho Chi Minh City, Vietnam

2013 **Robot Control Software Developer**
BK4 and BKIT Number One Team · Vietnam National Robot Contest

2012 **Embedded Software Developer**
ChipFC Team · Texas Instruments National MCU Design Contest · 1st Place