HA M. DO

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Stillwater, OK 74075, USA

PROFILE

- Highly self-motivated Ph.D. candidate with extensive research experience in robotics and machine learning ranging from theoretical algorithm development to real-world implementation.
- 7+ years experience in programming; proficient in C/C++, Python, Matlab, Java; highly proficient in data structures and algorithms, object-oriented analysis, design, programming, and testing.
- 6+ years experience in mobile robots, computer vision, robot audition, machine learning, natural language processing, and hardware design; proficient in ROS, OpenCV, Hark, NLTK, Tensorflow.
- Passionate about solving problems and creating robotics applications to improve quality of life.

EDUCATION

Sep. 2018 **Ph.D. in Electrical Engineering**, Oklahoma State University, USA (*Expected*)
Thesis: *Robot-assisted elderly care in smart homes*

May 2015 **M.Sc in Electrical Engineering**, Oklahoma State University, USA
Thesis: *Developing a home service robot platform for smart homes*

May 1999 **B.S. in Electronics and Telecommunications**
Hanoi University of Science and Technology (HUST), Vietnam

RESEARCH INTERESTS

My primary research interests are in robotics and machine learning, focusing on mobile robots, human-robot interaction, auditory perception, spoken language understanding, and deep learning. My current research addresses problems in home robots and smart homes for geriatric care.

PROFESSIONAL APPOINTMENTS

Oklahoma State University, USA

2013–present *Graduate Research Associate*, Lab for Advanced Sensing, Computation and Control (ASCC Lab), School of Electrical and Computer Engineering.

2017–present *Graduate Research Associate*, Human Development and Family Science Department

2011–2013 *Graduate Research Assistant*, ASCC Lab, School of Electrical and Computer Eng.

Posts and Telecommunications Institute of Technology(PTIT), Vietnam

1999–2011 *Faculty member*, Department of Electronics Engineering

VIJATECH Co., Ltd., Hanoi, Vietnam

2004–2007 *Technical consultant*, Electronic technology transferring projects
Instructor, Courses: VHDL, Verilog, and CPLD/FPGA Design

RESEARCH EXPERIENCE

Oklahoma State University

2014–2018 *Graduate Research Associate*, NRI: Considerate Co-robot Intelligence through Ubiquitous Human State Awareness, the National Science Foundation Grant CISE/IIS 1427345
· Clinical screening interview using a social robot for geriatric care
· Socio-emotional maintenance in aging with robotic technology (SMART)

· Social robots for elderly care
· Robot-integrated Smart homes for elderly care
· Auditory learning for home service robots

2012–2013 *Graduate Research Assistant*, SHB: Type I (EXP): Context-aware Ubiquitous Human Health Monitoring, the National Science Foundation Grant CISE/IIS 1231671
· A framework for human-robot collaboration in a Mobile Visual Sensor Network
· An open platform telepresence robot with natural human interface

Posts and Telecommunications Institute of Technology

2009–2010 *Co-PI*, Design and Implementation of Embedded Systems for Information Processing Research project No.01/MN/2009/RD/DT, $1,500, funded by PTIT

2007–2008 *Senior Personnel*, Design and Implementation of a portable cable test instrument Research project No.05/TD/2007/RD/DT, $2,000, funded by PTIT

2005–2006 *PI*, Design and Implementation of CPLD/FPGA development Boards Research project No.04/HV/2005/RD/DT, $1,500, funded by PTIT

2004–2005 *PI*, Design and Implementation of development Boards for 8051 MCUs Research project No.04/HV/2004/RD/DT, $1,000, funded by PTIT

2002–2003 *PI*, Design and Implementation of Electronics the Circuit Experiment Boards driven by Computers. Research project No.32/2002/HV/P/DT, $2,000, funded by PTIT

2000–2002 *Senior Personnel*, Design and Implementation of the Internet Based Testing Software for Distance Training Centers of VNPT (Vietnam Posts and Telecommunications Group) Research project No.222/2000/TCT/AP/DT/83, $20,000, funded by VNPT

PUBLICATIONS

Books/Chapters

[B4] **Ha M. Do**, "*Chapter 2-Programmable Logic Device, Chapter 3-Fundamental of VHDL, Chapter 4-VHDL-based Logic Design Methodologies, Chapter 5-Case studies in Design of FPGA-based Digital System with VHDL,*" Digital Logic Design, Textbook, Posts and Telecommunications Institute of Technology (PTIT), Nov. 2010 (in Vietnamese).

[B3] **Ha M. Do**, "*Chapter 8-Programmable Logic Devices, Chapter 9-Methodologies of Digital System Design with VHDL*," Digital Electronics, Vietnam Posts and Telematics Publishing House, Mar. 2009 (in Vietnamese).

[B2] **Ha M. Do**, Ha T.T. Tran, and Linh T.T. Tran, "*Semiconductor Devices,*" Textbook, Posts and Telecommunications Institute of Technology (PTIT), 2007 (in Vietnamese).

[B1] **Ha M. Do**, "Fundamental of Electronic Measurement and Instrument," Textbook, Posts and Telecommunications Institute of Technology (PTIT), 2005 (in Vietnamese).

Journals

[J7] **Ha M. Do**, Weihua Sheng, Erin Harrington, and Alex Bishop, "Clinical screening interview using a social robot for geriatric care," *IEEE Transactions on Automation Science and Engineering*, 2018 (*Under Review*).

[J6] Minh Pham, **Ha M. Do**, and Weihua Sheng, "Negative emotion management using a smart shirt and a robot assistant," *IEEE Transactions on Automation Science and Engineering*, 2018 (*Under Review*).

[J5] **Ha M. Do**, Weihua Sheng, Meiqin Liu, and Yuexian Zou, "SoHAM: A sound-based human activity monitoring framework for home service robots," 2018 (*prepared manuscript*).

[J4] Duy Tran, **Ha M. Do**, Weihua Sheng, He Bai, and Girish Chowdhary, "Real-time Detection of Distracted Driving based on Deep Learning," *IET Intelligent Transport Systems* (2018).[link]

[J3] **Ha M. Do**, Minh Pham, Weihua Sheng, Dan Yang, and Meiqin Liu, "RiSH: A robot-integrated smart home for elderly care," *Robotics and Autonomous Systems* 101 (2018). [link]

[J2] Minh Pham, Yehenew Mengistu, **Ha M. Do**, and Weihua Sheng, "Delivering home healthcare through a Cloud-based Smart Home Environment (CoSHE)," *Future Generation Computer Systems*, 81 (2018). [link]

[J1] **Ha M. Do**, Weihua Sheng, and Meiqin Liu. "Human-assisted sound event recognition for home service robots," *Robotics and Biomimetics*, 3.1 (2016). [link]

Conferences

[C14] Erin Harrington, **Ha M. Do**, G. McCall, E. Boevers, Alex J. Bishop, Weihua Sheng, "Older adult interaction with social robots: Implications for socio-emotional well-being," 11th World Conference of Gerontechnology, May, 2018. [link]

[C13] E. Boevers, G. McCall, Erin Harrington, **Ha M. Do**, Alex J. Bishop, Weihua Sheng, "Exploring older adult concerns regarding acceptance and use of social companion robots," *11th World Conference of Gerontechnology*, May, 2018. [link]

[C12] G. McCall, E. Boevers, Erin Harrington, Alex J. Bishop, **Ha M. Do**, Weihua Sheng, "Emergent themes in the likes and dislikes of social robots expressed by older adults," *11th World Conference of Gerontechnology*, May, 2018. [link]

[C11] Francisco E. Fernandes, **Ha M. Do**, Kiran Muniraju, Weihua Sheng, Alex J. Bishop, "Cognitive orientation assessment for older adults using social robots," *Robotics and Biomimetics (ROBIO), 2017 IEEE International Conference on*, 2017. [link]

[C10] Yehenew Mengistu, Minh Pham, **Ha M. Do**, Weihua Sheng, "AutoHydrate: A wearable hydration monitoring system." *Intelligent Robots and Systems (IROS), 2016 IEEE/RSJ International Conference on.* 2016. [link]

[C9] **Ha M. Do**, Weihua Sheng, Meiqin Liu and Senlin Zhang, "Context-aware sound event recognition for home service robots," *Automation Science and Engineering (CASE), 2016 IEEE International Conference on.* 2016. [link]

[C8] Minh Pham, Yehenew Mengistu, **Ha M. Do**, Weihua Sheng, "Cloud-Based Smart Home Environment (CoSHE) for home healthcare." *Automation Science and Engineering (CASE), 2016 IEEE International Conference on.* 2016. [link]

[C7] Francisco E. Fernandes, Guanci Yang, **Ha M. Do**, Weihua Sheng, "Detection of privacy-sensitive situations for social robots in smart homes," *Automation Science and Engineering (CASE), 2016 IEEE International Conference on.* 2016. [link]

[C6] **Ha M. Do**, Weihua Sheng and Meiqin Liu, "An open platform of auditory perception for home service robots," *Intelligent Robots and Systems (IROS), 2015 IEEE/RSJ International Conference on*, pp. 6161-6166. 2015. [link]

[C5] **Ha M. Do**, Craig J. Mouser, Meiqin Liu, Weihua Sheng, "Human-robot collaboration in a Mobile Visual Sensor Network," *Robotics and Automation (ICRA), 2014 IEEE International Conference on*, pp.2203,2208, Jun. 2014. [link]

[C4] **Ha M. Do**, Craig J. Mouser, Ye Gu, Sam Honarvar, Tingting Chen, and Weihua Sheng, "An Open Platform Telepresence Robot with Natural Human Interface," *Cyber Technology in Automation, Control and Intelligent Systems (CYBER), 2013 IEEE 3rd Annual International Conference on*, pp.81,86, May 2013. [link]

[C3] Ye Gu, **Ha M. Do**, Yongsheng Ou, Weihua Sheng, "Human gesture recognition through a Kinect sensor," *Robotics and Biomimetics (ROBIO), 2012 IEEE International Conference on*, pp.1379,1384, Dec. 2012. [link]

[C2] **Ha M. Do**, Craig J. Mouser, Weihua Sheng, "Building a Telepresence Robot Based on an open-source Robot Operating System and Android," *Third Conference on Theoretical and Applied Computer Science (TACS 2012*), Oklahoma State University, Oklahoma, Feb. 2012. [link]

[C1] Hieu T. Nguyen, **Ha M. Do**, Bac H. Dang, Quang S. Dinh, and Minh. N. Nguyen, "A Development of the Digital Cable Faulty Detection and Measurement System", in *36th AIC*, Manila, Philippines, 2007.

Posters and Presentations

[P2] **Ha M. Do**, "Sound-based human activity monitoring for home service robots", *NSF Doctoral Consortium meeting*, Automation Science and Engineering (CASE), 2016 IEEE International Conference on. 2016.

[P1] **Ha M. Do** and Bac H. Dang, "Educating, training, and building human resources for electronics design in Vietnam", *the Conference on Convergence of Digital Technology: IT, Telecommunication and Electronics*, Vietnam Consumer Electronics Expo, Hanoi, Vietnam, Apr. 2008.

TEACHING EXPERIENCE

Courses Taught

Posts and Telecommunications Institute of Technology, Vietnam

413TKL340 Digital Logic Design	Spring 11, 10, 09, 08, 07
423DAT420 Digital System Design Projects	Summer 11, 10, 09
413CKD240 Semiconductor Devices	Fall 10, 09, 08, 07, 06
413DLD240 Electronic Measurements and Instruments	Fall 09, 08, 07, 05, 04, 03

HONORS AND AWARDS

• Graduate student award, Research Video Competition, My Research at OSU Rocks: Companion robots for elderly care, Oklahoma State University, 2017.
• Travel award, NSF Doctoral Consortium, the IEEE 12th Conference on Automation Science and Engineering (CASE 2016), the National Science Foundation Grant IIS 1645670, 2016.
• Aug. 2011–Jul. 2013, "VIED fellowship", a special program of the Vietnam Government to train the best Vietnamese young lecturers overseas.

PROFESSIONAL SERVICE

Journal Reviewing
• IEEE Transactions on Automation Science and Engineering: 2018, 2017, 2016, 2015
• IEEE Robotics and Automation Letters: 2018

Conference Reviewing
• IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS): 2018, 2017, 2016, 2015
• IEEE International Conference on Robotics and Automation (ICRA): 2018, 2017, 2016, 2015
• IEEE International Conference on CYBER Technology in Automation, Control, and Intelligent Systems (CYBER): 2017, 2016, 2015
• IEEE International Conference on Automation Science and Engineering (CASE): 2018, 2016
• IEEE International Conference on Robotics and Biomimetics (ROBIO): 2018, 2017, 2016, 2015

REFERENCES

1. **Dr. Weihua Sheng** (Advisor)
   Associate Professor, School of Electrical and Computer Engineering, Oklahoma State University
2. **Dr. Alex Bishop** (Supervisor)
   Associate Professor, Human Development and Family Science Dep., Oklahoma State University
3. **Dr. Jianhao Du** (Former ASCC Lab Manager)
   Senior Software Engineer, Mathworks