HOANG-DUNG BUI
Email: hbui20@gmu.edu | Website: https://buivn.github.io

- A robotic researcher–focusing on motion planning and decision making for multi-robot systems under uncertainty with limited communication (> 4 years experience).
- Broad skills and knowledge from mechanical design and manufacturing, feedback control system, real time embedded system, ROS, and machine learning.
- Creative, goal-oriented, meticulous work-planning, perfectionist person with easy-integration in a multicultural environment; excellent team player and strong builder of prolific collaborations.

RESEARCH/ACADEMIC EXPERIENCE

George Mason University | Fairfax, VA

Position: Research Assistant from Jan. 2021 -present
Task: Developing Path and Motion Planning for multi-robot systems under uncertainty, including:

- **MRUN motion planner** for multi-robot systems operating in unknown environments,
- **MA-DL pathfinding** for multi-agent teams under limited communication range constraint,
- **Learning-guided motion planning** for robot with dynamics,
- **Learning-informed motion planning** for vehicles with dynamics under uncertainty.

University of Nevada, Reno | Reno, NV

Position: Research Assistant from Jan. 2019 - Dec. 2020
Task: Developing control frameworks for several types of physical robots, including:

- **A control framework for an Inchworm Hybrid Robot** for inspecting steel bridge-like structures,
- **A control framework for AUBO manipulators** in sorting applications.

The control framework has inputs of various data from LIDAR, RGB and Ultrasonic sensors.

Reviewer for IROS, ICRA, and IEEE RAL

- Peer-Reviewer for robotics conferences and journals: IROS, ICRA, and IEEE-RAL since 2020

EDUCATION

George Mason University | Fairfax, VA

- Ph.D. in Computer Science (robotics), from Jan. 2021 - present
- Study/research: Path and Motion Planning for robot systems under uncertainty.

University of Nevada, Reno | Reno, NV

- MSc. in Computer Science, from Jan. 2019 - 2020
- Study/research: Autonomous Control Frameworks for robotic systems
- Current GPA: 3.4/4.0

University of Siegen | Siegen, Germany

- From 10.2011 to 04.2014
- MSc. in Mechatronics
- Thesis: An interdisciplinary project including State-space and Distributed Control for a physical Inverted Rotary Pendulum using TTCAN and Real-time Operation System.

- GPA: 1.8/4.0

Hanoi University of Science and Technology | Hanoi, Vietnam

- From 09.2002 to 06.2007
- Bachelor of Science in Mechanical Engineering with an emphasis in Fine Mechanics
- GPA: 7.17/10

SKILLS

Programming and Softwares	Languages
Expert in Python, TensorFlow, C++, ROS, Ubuntu Efficient in MatLab, Java, Embedded C, FreeRTOS, TTCAN Experience with AutoCAD, NX, SolidWork Github: https://github.com/buivn	-Vietnamese: Native -English: (TOEFL iBT 92, GRE 314) -German: Intermediate (B1)

SCHOLARSHIP & AWARDS

- UNR Graduate IM Access Grant (2020)
- UNR Departmental Scholarship (2019)
- Full Master Scholarship from Vietnam Ministry of Education and Training (03.2010)
- DAAD Supporting Scholarship - Germany (10.2010)

REFERENCES

- Prof. Erion Plaku
  Email: plaku@gmu.edu
- Prof. Gregory Stein,
  E-mail: gjstein@gmu.edu
- Prof. Harold Greenwald,
  E-mail: hgreenwa@gmu.edu

Department of Computer Science, The Volgenau School of Engineering, George Mason University
4511 Nguyen Engineering Building,
Patriot Circle, Fairfax, VA 22030

PUBLICATIONS

Several Interesting publications:

- *Multi-agent Path Finding under Limited Communication Range Constraints via Dynamic Leading - Hoang-Dung Bui, Erion Plaku, Gregory J. Stein, Reviewing at IEEE RA-L.*
- *Multi-Robot Guided Sampling-Based Motion Planning with Dynamics in Partially Mapped Environments - Hoang-Dung Bui, Erion Plaku, Gregory J. Stein - IEEE-Access 2024*
- *Improving the Efficiency of Sampling-based Motion Planners via Runtime Predictions for Motion-Planning Problems with Dynamics - Hoang-Dung Bui, Yuanjie Lu, Erion Plaku - IROS-2022*
- *Control framework for a hybrid-steel bridge inspection robot - Hoang-Dung Bui, Son Nguyen, Umme Hafsa Billah, Chuong Le, Alireza Tavakkoli, Hung M La - IROS2020*

- Scholar-Link: https://scholar.google.com/citations?user=QgiHGfgAAAAJ&hl=en
- LinkIn https://www.linkedin.com/in/hoang-dung-bui-90b7565b/