



# BACH-THUAN BUI

+81 804-864-3654

[thuan.aislab@gmail.com](mailto:thuan.aislab@gmail.com)

[thuanbb.github.io](https://thuanbb.github.io)

[Google Scholar](#)

## EDUCATION

**DPhil** | *Information Science and Engineering* | GPA 5.0/5.0

Ritsumeikan University

Oct. 2022 – Now

Osaka, Japan

**Master of Engineering** | *Information Science and Engineering* | GPA 4.67/5.0

Ritsumeikan University

Oct. 2020 – Sep 2022

Shiga, Japan

**Bachelor of Engineering** | *Telecommunications Engineering*

Hanoi University of Science and Engineering

Sep. 2015 – Sep 2019

Hanoi, Vietnam

## RESEARCH INTERESTS

Computer Vision/Machine Learning/Visual Localization/Visual SLAM/Evolutionary Algorithm. About one year of industry experience developing AI algorithms for face detection and recognition before joining AIS Lab to do research on camera re-localization and mapping using machine learning, which is my recent interest.

## SELECTED PUBLICATIONS

1. Huy-Hoang Bui, Bach-Thuan Bui, Dinh-Tuan Tran, and Joo-Ho Lee  
**Leveraging Neural Radiance Field in Descriptor Synthesis for Keypoints Scene Coordinate Regression.** IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024. [Paper]
2. Bach-Thuan Bui, Huy-Hoang Bui, Dinh-Tuan Tran, and Joo-Ho Lee  
**Representing 3D sparse map points and lines for camera relocalization.** IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024. [Paper | Website | Code | LinkedIn]
3. Bach-Thuan Bui, Dinh-Tuan Tran, and Joo-Ho Lee  
**D2S: Representing local descriptors and global scene coordinates for camera relocalization.** arXiv preprint, 2023. [Paper | Website | Code]
4. Bach-Thuan Bui, Dinh-Tuan Tran, and Joo-Ho Lee  
**Fast and Lightweight Scene Regressor for Camera Relocalization.** 16th IEEE/SICE International Symposium on System Integration (SII), 2023. [Paper | Code]
5. Bach-Thuan Bui, Dinh-Tuan Tran, and Joo-Ho Lee  
**FeatLoc: Absolute pose regressor for indoor 2D sparse features with simplistic view synthesizing.** ISPRS Journal of Photogrammetry and Remote Sensing, 2022. [Paper | Code]
6. Bach-Thuan Bui, Linh Ho Manh, Kiem Nguyen Khac, Michele Beccaria, Andrea Massaccesi, and Riccardo Zich  
**Evolved design of microstrip patch antenna by genetic programming.** International Conference on Electromagnetics in Advanced Applications (ICEAA), 2019. [Paper | Code]

## WORK EXPERIENCE

**Research Intern**

Coolant

August 2024 – Now

San Francisco, USA

- Research on Structure from Motion for Aerial Forestry Images
- Guiding Image Matching by Edge Features

<b>Research Assistant</b> Advanced Intelligent System Laboratory	June 2021 – Now Shiga, Japan
<ul style="list-style-type: none"> <li>• Developed a back-end API for data collection on cars</li> <li>• Analyzed the collected data and proposed a recommendation system based on driver's behavior</li> </ul>	
<b>AI Algorithm Engineer</b> VTI Corporation	November 2019 – April 2020 Hanoi, Vietnam
<ul style="list-style-type: none"> <li>• Member of AI algorithms team, working on face recognition using deep learning</li> </ul>	
<b>Laboratory Assistant</b> Communications Research and Development Laboratory	Oct. 2017 – Oct. 2019 Hanoi, Vietnam
<ul style="list-style-type: none"> <li>• Led a group of undergrad. students for doing research on evolutionary algorithms on antenna design</li> </ul>	

## EXTRACURRICULAR ACTIVITIES

---

<b>Volunteer</b> International Conference on Intelligent Robots and Systems (IROS), Kyoto, Japan	October 2022
<b>Certificate of Participation</b> The 36th student's research competition, Hanoi University of Science and Technology, Hanoi, Vietnam	May 2019
<b>Volunteer</b> International Conference on Communications and Electronics (ICCE), Hue, Vietnam	July 2018

## HONORS AND AWARDS

---

<b>Research Grant For Doctoral Student</b> For a short-term exchange at the Technical University of Munich, Germany (JPY 500,000)	July 2024
<b>Research Encouragement Award</b> Recognition for high-quality research results at Ritsumeikan University in 2023	Feb 2024
<b>Research Grant For Doctoral Student</b> For a foreign research exchange (JPY 300,000)	Jan 2024
<b>Young Author Award</b> SICE International Young Author Award, with prize money of JPY 100,000 in SII2024	Jan 2024
<b>Excellent Research Award</b> Recognition for high-quality research results at Ritsumeikan University in 2022	March 2023
<b>Japanese Government Scholarship (MEXT)</b> Merit-based grant for students pursuing M.E. education in Japan	Oct. 2022 – Sep. 2025
<b>Candidates to be student representatives at the degree awarding ceremony</b> Chosen based on overall academic and research performance during M.E. study	Spring 2022
<b>Japanese Government Scholarship (MEXT)</b> Merit-based grant for students pursuing Ph.D. education in Japan	Oct. 2020 – Sep. 2022
<b>Third Prize of Science Research Competition for Student</b> Prize for research results on evolutionary algorithm in the automation of antenna design	May 2019

## SKILLS

---

**Languages:** Strong reading, writing and speaking competencies for English and Vietnamese.  
**Programming:** Python (Pytorch, NumPy, SciPy, Matplotlib, Pandas), C/C++, Assembly, MATLAB, ROS.  
**Document Creation:** Microsoft Office Suite, LaTeX, Markdown.