VAN-THUAN MAI, M.sc.

Senior Research

STS (Simulation to Solution) Engineering Inc., South Korea.

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Educations

2020 – 2022 **M.Sc. Civil Engineering and Naval Architecture, Changwon National University, South Korea.**
Ship Dynamic and Control Lab, Supervisor: **Prof. Yoon Hyeon Kyu**

2015 – 2020 **B.Sc. Faculty of Transportation Mechanical Engineering, The University of Da Nang, University of Science and Technology, Da Nang city, Viet Nam**.

Experiences

2023 – · · · · **Senior Research,** STS (Simulation to Solution) Engineering Inc., South Korea.

2022 – 2023 **Research Assistant,** Department at Naval Architecture and Ocean Engineering, in Inha University, South Korea.
Ships and Offshore Structures Engineering Lab, Supervisor: **Prof. Joonmo Choung.**

Feb. – 2019 **Exchange,** The Winter School Program at Yokohama National University, Yokohama city, Japan.

2018 – 2019 **Internship,** Hai Son Shipbuilding and Repairing - Song Thu corporations.

2017 – 2019 **Internship,** Engine and Ship Test Center - The University of Da Nang, University of Science and Technology.

Miscellaneous

Awards and Achievements

2021 **Distinguished Paper Award**, presented at Asia Navigation Conference 2021, Shanghai, China. [certificate] [conference's link: page 41, C5-2]

2020 **Excellence Scholarship**, The University of Da Nang, University of Science and Technology, Viet Nam.

2018 **Awarded of Scientific research Competition**, by Headmaster and Department's leader, The University of Da Nang, University of Science and Technology, Viet Nam.

2017 **Awarded Excellent Student**, in Youth Union Activities every year by the Headmaster, The University of Da Nang, University of Science and Technology, Viet Nam.

Research Interests

My research focus centers on:

- Numerical Simulation
- Fluid-structure interaction
- Machine Learning
- Deep Learning

Research Publications

Journal Articles

1. **V. T. Mai**, T. L. Mai, and H. K. Yoon, "Numerical investigation of motion response of a tanker on varying vertical center of gravities,**Under review**," *Journal of Ocean Engineering and Technology*,
2. T. T. D. Nguyen, **V. T. Mai**, S. Lee, and H. K. Yoon, "An experimental study on hydrodynamic forces of korea autonomous surface ship in various loading conditions," *Journal of Navigation and Port Research*, vol. 46 Issue 2, pp. 73–81, 2022. URL: https://doi.org/10.5394/KINPR.2022.46.2.73.

Conference Proceedings

1. T. T. D. Nguyen, H. T. Vu, **V. T. Mai**, and H. K. Yoon, "Design of usv hull form for drone's taking off and landing and its performance test using hardware in the loop test," in *Korea Marine Science and Technology 2022 (KMST)*, ICC-Jeju, South Korea.
2. **V. T. Mai**, L. San, T. T. D. Nguyen, and H. K. Yoon, "An experimental study on effect on effect of loading conditions on hydrodynamic forces acting on a ship," in *Asian Navigation Conference 2021(ANC)*, Tianjin, China.

Projects

1. S. J. Park, **V. T. Mai**, and J. M. Choung, in *"Calculating Long Term Assessment of an AI-based fishing boat safety design data platform by using CFD" Inha University, South Korea, 2023."*
2. **V. T. Mai** and J. M. Choung, in *"Lift Simulation for Ro-Ro Sewol Ferry Wreck Load out of Water Recovery Curve Analysis using ABAQUS" Inha University in South Korea, 2023.*
3. **V. T. Mai** and J. M. Choung, in *"Impact Damage Analysis the KDDX-Class Destroyer Collision Simulator for Rocks, Tankers, and Container Ships by ABAQUS" Inha University, South Korea 2023.*
4. **V. T. Mai** and L. JaeBin, in *"Machine learning-based soil corrosion rate prediction model through the optimization of input collecting big data", South Korea, 2023.*
5. **V. T. Mai** and L. JaeBin, in *"Analysis of 560 kWh vortex buffer tank CFD - Gasan Digital Center", South Korea, 2023.*
6. **V. T. Mai** and L. JaeBin, in *"ABAQUS Analysis for Earthquake-Resistance Design of Fire-Fighting Facilities", South Korea, 2023.*
7. **V. T. Mai** and H. K. Yoon, in *"An Experimental and Numerical Study of Secondary Wave Force on Shuttle Tanker using Ansys AQWA" Changwon National University, South Korea, 2022.*

Skills

Languages	Python, C++, Matlab, LabVIEW, LaTeX.
Frameworks	Google Colab (cloud-based) | PyTorch | TensorFlow MatplotLib | NumPy | SciPy | Pandas | Git | Vizro | PyDEns.
Drawing	AutoCAD 2D-3D, Rhinoceros 3D.
Simulation	Hyperworks, Abaqus, Ansys AQWA, SolidWorks.
Plotting	OriginLab, Grapher.

Courseworks

Updating...

Machine Learning Specialization, Stanford Uni., Instructors: Andrew Ng

[certificate]

- Supervised Machine Learning: Regression and Classification
- Advanced Learning Algorithms
- Unsupervised Learning, Recommenders, Reinforcement Learning

Deep Learning Specialization, Stanford Uni., Instructors: Andrew Ng

[certificate]

- Neural Networks and Deep Learning
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization
- Structuring Machine Learning Projects
- Convolutional Neural Networks
- Sequence Models

Deep Neural Networks with PyTorch, IBM AI Engineering Specialization

[certificate]

References

Prof. Hyeon Kyu Yoon
Professor, Supervisor at Ship Dynamic and Control Lab. belongs to the Department of Naval Architecture and Marine Engineering.
Changwon National University.
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