VAN-THUAN MAI, M.sc.

Research Assistant

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Educations

2020 – 2022 **M.Sc. Naval Architecture and Marine Engineering, Changwon National University, South Korea.**
Ship Dynamic and Control Lab, Supervisor: **Prof. Yoon Hyeon Kyu**
Thesis: *Influence of VCG on Maneuvering and Seakeeping for KVLCC2 in waves.*

2015 – 2020 **B.Sc. University of Science and Technology, The University of DaNang, Vietnam**.
Thesis: *Design Technological Process of Manufacturing Steel Fishing Boat KN-761-VN and Manufacturing with Composite Material.*

Experiences

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

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

2018 – 2019 **Internship,** Haison Shipbuilding and Repairing - SongThu corporations.

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

Research Publications

Journal Articles

1. **V. T. Mai**, T. L. Mai, and H. K. Yoon, "Quantification of roll damping coefficient through experimental and numerical analysis of vertical center of gravity variations for kvlcc2 tankers, '**processing**',"
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, H. K. Yoon, and T. T. D. Nguyen, "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. J. H. Kim, T. T. D. Nguyen, T. L. Mai, **V. T. Mai**, and H. K. Yoon, in *"A Study on the Perform Experiment and the Analysis of Motion for the Evaluation of the Navigation Performance of Marine Garbage Barge Screening Line".*
   •Conducted pre-tests, including calibration, ballast, inertia test, and roll decay test, to ensure model accuracy and reliability.
   •Set up the model in a test tank attached to the carriage above the tank.
   •Performed seakeeping tests to measure the movement of the Garbage Barge ship.
   •Analyzed data and evaluated the model and experiment for further insights and improvements.
2. S. J. Park, **V. T. Mai**, and J. M. Choung, in *"Development and demonstration of an AI-based fishing boat safety design data platform" Inha University, South Korea 2023."*
3. **V. T. Mai** and J. M. Choung, in *"Impact Damage Analysis of KDDX-Class Destroyers Colliding with Rocks, Tankers, and Container Ships" Inha University, South Korea 2023.*
   • Refinement of Components: Use HyperMesh software to refine the relevant parts using 100mm x 100mm shell elements.
   • Collision Simulation with Rocks: Perform collision a simulation between the KDDX-Class destroyer and reefs using Abaqus software.
   • Collision Simulation with Tankers and Container Ships: Conduct collision simulations between the KDDX-Class destroyer and tankers, as well as container ships, at different speeds using Abaqus software.
   • Impact Damage Calculation: Calculate the extent of destruction and impact damage for each collision simulation.
4. **V. T. Mai** and J. M. Choung, in *"Load out of Water Curve Analysis for Ro-Ro Ferry Sewol Wreck Recovery using a Lifting Beam" Inha University, South Korea 2023.*
   • Mesh optimization and payload simulation for Sewol ferry using HyperMesh and Abaqus, with comparative analysis of experimental results", 2023.
5. **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	Strong reading, writing, and speaking competencies in English.
Coding	Python, C++, Matlab.
Drawing	AutoCAD 2D-3D, Rhinoceros 3D, DelfShip.
Simulation	Hyperworks, Abaqus, Ansys AQWA, OrcaFlex.

Miscellaneous

Awards and Achievements

2021 **Distinguished Paper Award**, presented at Asia Navigation Conference 2021, Shanghai in China.

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

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

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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Prof. Joonmo Choung
Professor, Supervisor at Ships and Offshore Structures Engineering Lab. belongs to the Department of Naval Architecture and Ocean Engineering.
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