

Soye Choung

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LABORATORY Advanced Ship and Offshore Process Engineering Lab
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<Academic background>

- M. Sc., Naval Architecture and Ocean Engineering, Seoul National University, South Korea, 2024.09 – Present
- B. Sc., Naval Architecture and Ocean Engineering, Inha University, South Korea, 2019.03 – 2024.02

<Research Interests>

- Life Cycle Assessment (LCA)
- Onboard Carbon Capture & Storage system (OCCS)
- CO₂ supply chain
- Alternative fuels for shipping
- Process optimization
- Cost analysis

<Training>

- Aspen HYSYS Dynamics: Introduction to Dynamic Modeling (EHY 223), 2024
- Essentials of Aspen HYSYS and Carbon Capturing Techniques for Sustainability Modeling (CEHY 2202), 2024
- CO₂ Removal Processes Using Aspen Plus (SUS-P203), 2025
- Improved Process Operability and Control Through Aspen Plus Dynamic Models (EAP 2411), 2025
- Introduction to Aspen Adsorption (EAP 288), 2025
- LRFC Student Internship, 2025.07.14 – 2025.08.19
- gPROMS Training Introduction: gRPOMS Process (2026)

<Certificates>

- Computer Specialist in Spreadsheet & Database Level-1, 2022

<Scholarship>

- 2024 ABS Scholarship, In recognition of exceptional scholastic achievement, American Bureau of Shipping (ABS), 2024

<Awards>

- Best Oral Presentation Award, The Society of Naval Architects of Korea, 2026

<Computer Skills>

- Aspen Plus
- Aspen Plus Dynamics
- Aspen Hysys
- Aspen Hysys Dynamics
- gPROMS Process
- Matlab
- Greet (Life Cycle Assessment)
- MS Access, Excel, Powerpoint, Word, etc.

<Teaching Experience>

- Teaching Assistance, SNU
 - ✓ Ocean Thermodynamics, Autumn 2024
 - ✓ SNU Freshman Seminar, 2025

<R&D Projects>

Project	Term	Partner	Co-Investigator
K-EU Development of an Energy-Efficient Onboard Carbon Capture System	2024.04 – 2028.12	Korea Ministry of Oceans and Fisheries	Hongkyoung, Shin Ijun, Jeong Juyoung, Oh

Technology development of Onboard Carbon Capture and Storage System and Pilot Test	2024.04 – 2025.12	Korea Research Institute of Ships & Ocean engineering (KRISO)	Hongkyoung, Shin Ijun, Jeong Juyoung, Oh
Verification of Parameters for Optimal Design of Carbon Capture System	2024.09 – 2024.12	Samsung Heavy Industries Co., Ltd. (SHI)	Hongkyoung, Shin Ijun, Jeong
Technology for evaluating Greenhouse gas emissions reduction quantities from CO ₂ capture-storage-utilisation technologies	2025.04 – Present	Korean Ministry of Climate, Energy and Environment	Jeonghun, Kim Jungmin, Kim ¹ Jungmin, Kim ²

<Publications/Proceedings>

- Publications

- ✓ Jeong, I., Shin, H. K., [Choung, S.](#), Lim, Y. (2025). Techno-economic and environmental evaluation of onboard carbon capture and storage system through heat integration and solvent selection. *Energy*, 334, 1377477.
- ✓ Jeong, I., [Choung, S.](#), Shin, H. K., Lim, Y. (2026). Greenhouse gas reduction strategy considering fleet compositions. *Chemical Engineering Journal*, 534, 175151.
- ✓ [Choung, S.](#), Shin, H., Jeong, I., Kim, J., & Lim, Y. (2026). *Development of a new index for a ship considering ship-oriented life cycle greenhouse gas emissions*. *Journal of Ocean Engineering and Technology*. Advance online publication.
<https://doi.org/10.26748/KSOE.2026.017>

- Oral presentations

- ✓ “Comparative life cycle assessments of alternative marine fuels and onboard carbon capture and liquefaction system from the perspective of end-users”, 2025 The Korean Association of Ocean Science and Technology Societies (KAOSTS) Spring Joint Conference, Busan, South Korea, 2025.05
- ✓ “Ship – oriented life cycle greenhouse gas emissions assessment”, 2025 the Society of Naval Architects of Korea General Meeting & Annual Autumn Conference, Changwon, South Korea, 2025.11
- ✓ “Optimization of transport routes and costs for maritime liquefied CO₂ supply chain”, 2026 the Korean Association of Ocean Science and Technology Societies (KAOSTS) Spring Joint Conference, Jeju, South Korea, 2026.05.
- ✓ “Development of a new index for a ship considering ship-oriented life cycle greenhouse gas emissions”, 18th International Conference on Greenhouse Gas Control Technologies (GHGT-18), Perth, Australia, 2026.10 (expected)

<References>

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