

## Scientific Publications

*Abbreviations for names of conferences or other sources are provided at the end of the list.*

### 2023

Henrique Gaspar, Ludmila Seppälä, Herbert Koelman, José Jorge Garcia Agis

#### **Can European Shipyards be Smarter? A Proposal from the SEUS Project**

[https://www.ntnu.edu/documents/1324404881/0/39\\_SEUS+Gaspar+et+al.pdf/d5f3af7a-5af5-38b3-a312-075222157ec5?t=1686758055674](https://www.ntnu.edu/documents/1324404881/0/39_SEUS+Gaspar+et+al.pdf/d5f3af7a-5af5-38b3-a312-075222157ec5?t=1686758055674)

Ludmila Seppälä

#### **Integrated Shipbuilding Data Management – COMPIT 2023**

[http://data.hiper-conf.info/compit2023\\_drubeck.pdf](http://data.hiper-conf.info/compit2023_drubeck.pdf)

Yasuo Ichinose, Henrique M. Gaspar

#### **Interactive ship flow simulation enhanced by neural network model in a web environment - ECMS 2023?**

doi: <https://doi.org/10.7148/2023-0155>

### 2024

Giovanni A. Amara, Kazuo Nishimoto, Edgard B. Malta, Henrique M. Gaspar, Mehrnoosh

Nickpasand, Rodolfo T. Gonçalves

#### **FOWT Hull Concept Assessments Considering the Design for Operability - ISOPE 2024**

Paper Number: ISOPE-I-24-218

<https://onepetro.org/ISOPEIOPEC/proceedings-abstract/ISOPE24/All-ISOPE24/ISOPE-I-24-218/546606>

Herbert Koelman

#### **Piping layout integrated in ship design and stability evaluation – IMDC 2024**

doi: <https://doi.org/10.59490/imdc.2024.886>

Herbert Koelman, Bastiaan Veelo, Ludmila Seppälä, Paul Filius

#### **Closing the gap between early and detailed ship design models – IMDC 2024**

doi: <https://proceedings.open.tudelft.nl/imdc24/article/view/837>

Janica Altea Bronson, Icaro Fonseca, Henrique Gaspar

#### **Challenges Towards an Integrated Digital Twin Platform for Maritime Systems: Tackling Shifts**

**In Data Ownership – OMAE 2024**

doi: <https://doi.org/10.1115/OMAE2024-136483>

Janica Altea Bronson, Icaro Fonseca, Henrique Gaspar, Fernando Luz

**Data Models in Ship Design and Construction – Insights from 4D BIM – IMDC 2024**

doi: <https://doi.org/10.59490/imdc.2024.842>

Janica Altea Bronson, Fernando Luz, Icaro Fonseca, Henrique Gaspar

**Graph Databases for Multi-Domain Taxonomies in Maritime Systems – ECMS 2024**

doi: <http://dx.doi.org/10.7148/2024-0250>

Janica Altea Bronson, Henrique Murilo Gaspar, Cecilia Haskins, Icaro Aragao Fonseca, , Jose Jorge Garcia Agis

**Robust Digital Information for Physically Large and Complex SoS: A Maritime Design Case Study – SOSE 2024**

doi: <https://doi.org/10.1109/SOSE62659.2024.10620954>

Jose Jorge Garcia Agis, Per Olaf Brett

**Digital Shipbuilding Needs, Challenges, and Opportunities – IMDC 2024**

doi: <https://doi.org/10.59490/imdc.2024.849>

Junsong He, Yong Se Kim, Ludmila Seppälä

**A Service Blueprint Approach in Shipbuilding Activity Mapping – IMDC 2024**

doi: <https://doi.org/10.59490/imdc.2024.827>

Ludmila Seppälä

**Industry 5.0: Transforming ship design through human-centered approach – IMDC 2024**

doi: <https://doi.org/10.59490/imdc.2024.865>

Maria Jose Legaz, Henrique M. Gaspar

**Computer Vision For Reverse Engineering In The Design, Simulation And Operation Of Marine Systems – ECMS 2024**

ISSN: 2522-2414 doi: <https://doi.org/10.7148/2024-0234>

Pengcheng Ni, Jussi Kantola

**Taxonomy of knowledge management systems in a complex environment - International Conference on Applied Human Factors and Ergonomics - AHFE International 2024**

doi: <http://doi.org/10.54941/ahfe1004933>

Viktoriia Koilo

**Decarbonization in the maritime industry: Factors to create an efficient transition strategy – Business Perspectives. Volume 15 2024, Issue #2, pp. 42-63**

doi: [http://dx.doi.org/10.21511/ee.15\(2\).2024.04](http://dx.doi.org/10.21511/ee.15(2).2024.04)

Viktoriia Koilo

**Value chain approach towards decarbonization in the maritime industry: factors to create an efficient transition strategy - International Conference on Sustainable Initiatives in Maritime Sector: Main Challenges and Future Trends 2024**

Christin-ID: 2283071, handle: <https://hdl.handle.net/11250/3607010>

2025

Dawid Stade, Maximilian Idjen, Elisabeth Brandenburg

**Multi-Structure Product Data Management in Ship Design** (COMPIT 2025)

doi: <https://doi.org/10.5281/zenodo.17223682>

Diego De León, Herbert Koelman

**Generative Algorithms in Early Ship Design: An Exploration of Hull Subdivision Generation -**  
COMPIT 2025

doi: <https://doi.org/10.5281/zenodo.17534156>

Gocke Yilmaz, Miia Martinsuo, Henrique Gaspar, Janica Altea Bronson

**Interoperability in Project-Based Industries: Learnings and Challenges** (IFA MIM 2025)

doi: <https://doi.org/10.1016/j.ifacol.2025.09.240>

Jinsang Ha, Janica Altea Bronson, Henrique Gaspar

**Managing Design Changes in Shipbuilding: Proposing a Real-Time Simulation Dashboard**  
(PRADS 2025)

doi: <https://doi.org/10.5281/zenodo.17306358>

Janica Altea Bronson, Maryam Teimouri, Henrique Gaspar, Icaro Fonseca, Karolina Bierkoszka, Filip Ginter, Herbert Koelman

**A RAG-based LLM Approach for Data Validation and Harmonization in Ship Design** (COMPIT 2025)

doi: <https://doi.org/10.5281/zenodo.17493949>

Jongsong He

**SEUS \_ Smart European Shipbuilding** (Industrial Engineering and Management Research Seminar)

doi: <https://doi.org/10.5281/zenodo.17864267>

Junsong He, Miia Martinsuo

**Using data platforms for smart services over the lifecycle of a complex system** (SSC 2025)

doi: <https://doi.org/10.5281/zenodo.17864332>

Junsong He, Miia Martinsuo

**Using data platforms for smart service innovation in delivering complex systems** (ISPIM 2025)

*Link not available this moment.*

Junsong He, Miia Martinsuo

**Balancing between efficiency value and service value in delivering customized solutions** (World Mass Customization and Personalization Conference)

*Link not available this moment.*

Karolina Bierkowska, Tomasz Hinz, Grzegorz Mazerski, Przemysław Krata

**Application of Neural Networks in Early-Stage Ship Design for Stability Evaluation Using IMO Second Generation Criteria** (IMAM 2025)

doi: [https://doi.org/10.1007/978-3-032-01566-2\\_6](https://doi.org/10.1007/978-3-032-01566-2_6)

Karolina Bierkowska, Henrique Gaspar, Tomasz Hinz

**Navigating AI in Naval Architecture: A Comparative Effectiveness Study of Machine Learning Models for Ship Stability** (COMPIT 2025)

doi: <https://doi.org/10.5281/zenodo.17493840>

Maryam Teimouri, Jenna Kanerva, Filip Ginter

**A Deep Dive into Multi-Head Attention and Multi-Aspect Embedding** (RANLP 2025)

doi: <https://doi.org/10.26615/978-954-452-098-4-146>

Pengcheng Ni, Jussi Kantola

**Exploring the factors influencing knowledge management strategy in the European shipbuilding industry: A pilot study.** *Journal of Knowledge Management Practice*, 25(6).

<https://doi.org/10.62477/jkmp.v25i6.595>

Zeynep Tacgin, Miia Martinsuo

**Design-based research for user-centered digital industrial training.** *Paper submitted to Journal of Technology and Science Education*. (2025)

Zeynep Tacgin, Miia Martinsuo

**Promoting digitalization competences in project-based firms: Design and testing of a digital learning solution.** *Paper submitted to Project Leadership and Society*. (2025)

Zeynep Tacgin

Contributors: Pengcheng Ni, Teimouribadelehdareh Maryam, Jussi Kantola, Filip Ginter

**Digitalisation & IT Innovations in Shipbuilding** - Industrial Engineering and Management Research Seminar

doi: <https://doi.org/10.5281/zenodo.17863948>

Zeynep Tacgin, Miia Martinsuo

**Instructional design to promote data-driven practices and digitalisation in shipbuilding projects** (INTED 2025)

doi: [10.21125/inted.2025.0573](https://doi.org/10.21125/inted.2025.0573)

Zeynep Tacgin, Miia Martinsuo

**An augmented reality solution for digitalisation training in shipbuilding: Systematic review and application development** (INTED 2025)

doi: [10.21125/inted.2025.0574](https://doi.org/10.21125/inted.2025.0574)

### Abbreviations for names of conferences or other sources

COMPIT - Computer and IT Applications in the Maritime Industries

OMAE – International Conference on Offshore Mechanics and Arctic Engineering

IFAC MIM – IFAC Conference on Manufacturing Modelling, Management and Control MIM

IMAM - International Congress of the International Maritime Association of the Mediterranean

IMDC – International Marine Design Conference

INTED – International Technology, Education and Development Conference

ISOPE – The International Ocean and Polar Engineering Conference

ISPIM - The International Society for Professional Innovation Management Conference

ECSM – The European Council for Modeling and Simulations

PRADS – International Symposium on Practical Design of Ships and other Floating Structures

RANLP - Proceedings of Recent Advances in Natural Language Processing

SOSE – Annual System of Systems Engineering Conference  
SSC – Spring Servitization Conference