

Curriculum Vitae

# Yong-Kuk Jeong

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**Date of Birth.** 7 June 1989

**Email.** jake8967@snu.ac.kr

**Telephone.** +82-10-2772-0681

**Address.** 36-411, Seoul National University  
1 Gwanak-ro, Gwanak-gu, Seoul 08826  
Republic of Korea

## Career

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| Mar. 2018 -<br>now | <b>Research Institute of Marine Systems Engineering, Seoul National University (SNU), Seoul, Rep. of Korea</b> <ul style="list-style-type: none"><li>• Postdoctoral Associate</li></ul> |
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## Education

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| Sep. 2011 -<br>Feb. 2018 | <b>Seoul National University (SNU), Seoul, Rep. of Korea</b> <ul style="list-style-type: none"><li>• Ph.D. in Engineering (Major: Naval Architecture and Ocean Engineering)</li><li>• Adviser: Prof. Jong Gye Shin</li></ul>                        |
| Mar. 2007 -<br>Feb. 2011 | <b>Seoul National University (SNU), Seoul, Rep. of Korea</b> <ul style="list-style-type: none"><li>• B.S. degree, GPA 3.57/4.30 (Major: Naval Architecture and Ocean Engineering, Department of Naval Architecture and Ocean Engineering)</li></ul> |

## Research Interests

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| Research<br>Areas | Shipyard Logistics Simulation<br>Ship Production Management<br>Discrete Event System Simulation<br>Life Cycle Assessment<br>Combinatorial Optimization Algorithm |
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## Research Papers (★: Ph.D. Dissertation Essays)

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- **Yong-Kuk Jeong**, Youngmin Kim, Su Heon Ju, Jong-Gye Shin, Jong-Choel Kim and Jong Hun Woo, (2018), A Spatial Layout Optimization Program considering the Survivability of a Naval Vessel in the Early Design Stage, *Journal of Ship Production and Design* (Published Online).
- Jong Moo Lee, **Yong-Kuk Jeong**, and Jong Hun Woo, (2018), Development of an Evaluation Framework of Production Planning for the Shipbuilding Industry, *International Journal of Computer Integrated Manufacturing* (Published Online).
- Youngmin Kim, Jong Hun Woo, **Yong-Kuk Jeong**, Jong-Gye Shin, (2018), Computational Shipyard Dynamics, *Journal of Ship Production and Design* (Published Online).
- ♦ **Yong-Kuk Jeong\***, SuHeon Ju, Huiqiang Shen, Dong Kun Lee, Jong Gye Shin, Cheolho Ryu, (2018), An analysis of shipyard spatial arrangement planning problem and a spatial arrangement algorithm considering free space and unplaced block, *International Journal of Advanced Manufacturing Technology*, 95, pp. 4307-4325. (\*Corresponding Author)
- ♦ **Yong-Kuk Jeong**, Philippe Lee, and Jong Hun Woo, (2018), Shipyard Block Logistics Simulation Using Process-centric Discrete Event Simulation Method, *Journal of Ship Production and Design*, 34(2), pp. 168-179.
- Jong Hun Woo, Youngmin Kim, **Yong-Kuk Jeong**, and Jong-Gye Shin, (2017), A Research on Simulation Framework for the Advancement of Supplying Management Competency, *Journal of Ship Production and Design*, 33(1), pp. 60-79.
- SeungHoon Nam, Dong Kun Lee, **Yong-Kuk Jeong**, Philippe Lee, and Jong-Gye Shin, (2016), Environmental Impact Assessment of Composite Small Craft Manufacturing Using the Work Breakdown Structure, *International Journal of Precision Engineering and Manufacturing-Green Technology*, 3(3), pp. 261-272.
- Dong Kun Lee, **Yong-Kuk Jeong**, Jong Gye Shin, and Dae-Kyun Oh, (2014), Optimized Design of Electric Propulsion System for Small Crafts using the Differential Evolution Algorithm, *International Journal of Precision Engineering and Manufacturing-Green Technology*, 1(3), pp. 229-240.
- Dong Kun Lee, Jong Gye Shin, Youngmin Kim, and **Yong Kuk Jeong**, (2014), Simulation-based Work Plan Verification in Shipyards, *Journal of Ship Production and Design*, 30(2), pp. 49-57.

## Conference Proceedings (the name of the presenter is underlined)

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- Beongseop Kim, **Yong-Kuk Jeong**, Seunghyeok Son, Su Heon Ju, Huiqiang Shen, Jong Gye Shin, (2018), A Shipyard Green Logistics Concept and a Strategic Simulation to Reduce the Transportation Distance of Assembly Blocks in Shipyard, *PRESM 2018*, Sapporo, Japan, 3-7 July, 2018.
- Jong Hun Woo, Jaeho Choi, Ji Hye Kim, **Yong-Kuk Jeong**, Philippe Lee, and Jong Ho Nam, (2018), Machine Learning in Ship Production, *COMPIT 2018*, Pavone, Italy, 14-16 May, 2018.
- **Yong-Kuk Jeong**, Jong Hun Woo, Philippe Lee, Youngmin Kim, Young-Ki Min, Jong Gye Shin, Yong Gil Lee, and Cheolho Ryu, (2018), Shipyard DES Simulation Framework and its Applications, *COMPIT 2018*, Pavone, Italy, 14-16 May, 2018.
- **Yong-Kuk Jeong**, Hui-Qiang Shen, SeungHoon Nam, Youngmin Kim, Jong-Gye Shin, Philippe Lee, Jae Ho Choi, and Jong Hun Woo, (2017), Verification and Validation of Shipyard Logistics Simulation System and Its Use Case Identification, *WSC 2017*, Las Vegas, NV, 3-6 December, 2017.
- Hui-Qiang Shen, **Yong-Kuk Jeong**, Seung-Hoon Nam, Youngmin Kim, Jong-Gye Shin, Dong Kun Lee, and Daekyun Oh, (2017), A Hierarchical Simulation Model for Workload Analysis of Ship Block Erection Process, *WSC 2017*, Las Vegas, NV, 3-6 December, 2017.
- Su Heon Ju, **Yong-Kuk Jeong**, Seunghyeok Son, Young Gi Min, Jong-Gye, Shin, JongChul Kim, Jong Hun Woo, and Philippe Lee, (2017), A layout design framework considering relations between internal space and external shape of naval vessels at the conceptual design, *ISOPE 2017*, San Francisco, CA, June 25–30, 2017.
- **Yong-Kuk Jeong**, Seung Hoon Nam, Youngmin Kim, Jong-Gye Shin, Young-Ki Min, Jong Hun Woo, Jae-Ho Choi, Sang-Hoon Kim, and Dae-Kyun Oh, (2017), A modeling and simulation method for multi-layered supply chain management in shipbuilding industries, *ACM SIGSIM PADS 2017*, NTU Singapore, 24-26 May, 2017.
- Byeongseop Kim, **Yong-Kuk Jeong**, Seunghyeok Son, Philippe Lee, Yonggil Lee, and Jong Hun Woo, (2017), The Extended Process-Centric Modeling Method for Logistics Simulation in Shipyards Considering Stock Areas, *COMPIT 2017*, Cardiff UK, 15-17 May, 2017.
- **Yong-Kuk Jeong**, Byeong-Seop Kim, Jong-Gye Shin, Philippe Lee, Jong Hun Woo, and Jong Moo Lee, (2016), A Ship Block Logistics Support System based on the Shipyard Simulation Framework, *WSC 2016*, Arlington VA, 11-14 December, 2016.
- Seung-hyeok Son, Youngmin Kim, Inhyuck Hwang, Hui Giang Shen, **Yong-Kuk Jeong**, Cheolho Ryu, Jong-Gye Shin, (2015), Design and Development of Manufacturing Information Calculation System for Formation of Curved Hull Plates, *MOTSP 2015*, Brela Croatia, 10-12 June, 2015.

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- **Yong-Kuk Jeong**, Philippe Lee, SeungHoon Nam, Dong Kun Lee, Jong-Gye Shin, (2015), Development of the Methodology for Environmental Impact of Composite Boats Manufacturing Process, *CIRP LCE 2015*, Sydney Australia, 7-9 April, 2015.
  - Jong-Gye Shin, Dong Hyun Ahn, Seung Hoon Nam, and **Yong-Kuk Jeong**, (2014), An Introduction to Small boat PLM Technology, *ICOR 2014*, Fiji, 13-15 October, 2014
  - Jong-Gye Shin, Seung Hoon Nam, and **Yong-Kuk JEONG**, (2014), Generic Work Breakdown Structure for Sailing Yacht Lifecycle Management, *ICOR 2014*, Fiji, 13-15 October, 2014.

## Research Projects

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| Oct. 2016 -<br>now       | <b>National IT Industry Promotion Agency, Republic of Korea</b> <ul style="list-style-type: none"><li>• Project name: Manufacturing strategy and execution simulation system to quantify shipbuilding manufacturing cost</li></ul>                           |
| Oct. 2014 -<br>now       | <b>Ministry of Trade, Industry &amp; Energy, Republic of Korea</b> <ul style="list-style-type: none"><li>• Project name: Simulation based production management system for middle-sized shipbuilding companies</li></ul>                                     |
| Sep. 2012 -<br>Dec. 2017 | <b>Ministry of National Defense, Republic of Korea</b> <ul style="list-style-type: none"><li>• Project name: Advanced Naval Vessel Research Laboratory<br/>(Study on the spatial layout algorithm considering the survivability of a naval vessel)</li></ul> |
| Jun. 2016 -<br>Nov. 2016 | <b>Daewoo Shipbuilding &amp; Marine Engineering Co., Ltd. (DSME)</b> <ul style="list-style-type: none"><li>• Project name: Development of the spatial block arrangement algorithm</li></ul>  |
| Aug. 2015 -<br>Nov. 2015 | <b>Daewoo Shipbuilding &amp; Marine Engineering Co., Ltd. (DSME)</b> <ul style="list-style-type: none"><li>• Project name: Study on the simulation framework for digital shipyards</li></ul>   |
| Jun. 2011 -<br>May. 2015 | <b>Ministry of Knowledge Economy, Republic of Korea</b> <ul style="list-style-type: none"><li>• Project name: Development of the integrated engineering management system and main parts for 20ft~40ft class sailing yachts</li></ul>                        |

## Course-Work Training (Overall GPA: 3.97/4.30)

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- Topics in Ship Production Engineering
- Topics in Ship Structural Design
- Simulation-based Manufacturing Systems
- Systems Engineering Management
- Product Lifecycle on Systems Engineering
- Shipyard Layout Planning and Spatial Planning
- Technology Valuation Assessment
- Integer Programs
- Theory of Scheduling
- Managerial Statistics

## Awards and Honors

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| Mar. 2012 -<br>Aug. 2013 | <b>STX Foundation</b>  |
| Nov. 2012                | <b>Encouragement Award</b> , Korean Institute of Industrial Engineers.                         |
| Feb. 2011                | <b>The Society of Naval Architects of Korea</b>  |
| Mar. 2007 -<br>Feb. 2011 | <b>National Scholarship For Science and Engineering</b> , Korea Student Aid Foundation (KOSAF) |

## Other Information

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| Language         | <ul style="list-style-type: none"><li>• <b>Korean:</b> native language</li><li>• <b>English:</b> fluent (speaking, reading), intermediate (writing)</li></ul>   |
| Technical Skills | <ul style="list-style-type: none"><li>• <b>Simulation Analysis:</b> DELMIA QUEST, AnyLogic, Simio</li><li>• <b>Programming Language:</b> C#, HTML, Python</li><li>• <b>Proficient in MS-office:</b> Word, Excel, PowerPoint</li></ul> |

## References

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### **Prof. Dr. Shin, Jong Gye (Advisor)**

Professor of Seoul National University, Seoul, Rep. of Korea

Email: [jgshin@snu.ac.kr](mailto:jgshin@snu.ac.kr)

Office: (+82)-2-880-7129

Mobile: (+82)-10-8843-6174

### **Prof. Dr. Woo, Jong Hun**

Professor of Korea Maritime and Ocean University, Busan, Rep. of Korea

Email: [jonghun\\_woo@kmou.ac.kr](mailto:jonghun_woo@kmou.ac.kr)

Phone: (+82)-51-410-4304

Mobile: (+82)-10-7288-0630

### **Prof. Dr. Lee, Dong Kun**

Professor of Mokpo Maritime University, Mokpo, Rep. of Korea

Email: [dklee@mmu.ac.kr](mailto:dklee@mmu.ac.kr)

Phone: (+82)-61-240-7322

Mobile: (+82)-10-2637-7312