

## Res. Asst. Çağlar Karatug

### Personal Information

**Email:** karatug@itu.edu.tr

**Web:** <https://avesis.itu.edu.tr/karatug>

### Education Information

Doctorate, Istanbul Technical University, Denizcilik, Deniz Ulaştırma Mühendisliği Anabilim Dalı, Turkey 2019 - Continues

Postgraduate, Istanbul Technical University, Denizcilik, Deniz Ulaştırma Mühendisliği Anabilim Dalı, Turkey 2017 - 2019

Undergraduate, İstanbul Teknik, Denizcilik , Gemi Makinaları İşletme Mühendisliği, Turkey 2011 - 2016

### Research Areas

Technical Sciences, Naval Architecture and Marine Engineering, Ship Machines

### Academic Titles / Tasks

Research Assistant, Istanbul Technical University, Denizcilik, Gemi Makineleri İşletme Mühendisliği, 2018 - Continues

### Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Determination of a maintenance strategy for machinery systems of autonomous ships**  
Karatug Ç., Arslanoğlu Y., Guedes Soares C.  
Ocean Engineering, vol.266, 2022 (SCI-Expanded)
- II. **Feasibility Analysis of the Effects of Scrubber Installation on Ships**  
Karatug Ç., Arslanoğlu Y., Guedes Soares C.  
Journal of Marine Science and Engineering, vol.10, no.12, 2022 (SCI-Expanded)
- III. **A novel methodology for the use of engine simulators as a tool in academic studies**  
Ceylan B. O., Karatug Ç., Arslanoğlu Y.  
JOURNAL OF MARINE SCIENCE AND TECHNOLOGY, vol.27, no.4, pp.1220-1232, 2022 (SCI-Expanded)
- IV. **Development of condition-based maintenance strategy for fault diagnosis for ship engine systems**  
Karatug Ç., Arslanoğlu Y.  
OCEAN ENGINEERING, vol.256, pp.111515, 2022 (SCI-Expanded)
- V. **Importance of early fault diagnosis for marine diesel engines: a case study on efficiency management and environment**  
Karatug Ç., Arslanoğlu Y.  
Ships and Offshore Structures, vol.17, no.2, pp.472-480, 2022 (SCI-Expanded)
- VI. **Machine learning based visibility estimation to ensure safer navigation in strait of Istanbul**  
Uyanık T., Karatug Ç., Arslanoğlu Y.  
Applied Ocean Research, vol.112, 2021 (SCI-Expanded)
- VII. **Design of a solar photovoltaic system for a Ro-Ro ship and estimation of performance analysis: A case study**  
Karatug Ç., Durmuşoğlu Y.

Solar Energy, vol.207, pp.1259-1268, 2020 (SCI-Expanded)

VIII. **Machine learning approach to ship fuel consumption: A case of container vessel**

Uyanık T., Karatuğ Ç., Arslanoğlu Y.

TRANSPORTATION RESEARCH PART D-TRANSPORT AND ENVIRONMENT, vol.84, 2020 (SCI-Expanded)

## Articles Published in Other Journals

I. **Risk assessment of sea chest fouling on the ship machinery systems by using both FMEA method and ERS process**

Ceylan B. O., Karatuğ Ç., Ejder E., Uyanık T., Arslanoğlu Y.

Australian Journal of Maritime and Ocean Affairs, 2022 (Scopus)

## Refereed Congress / Symposium Publications in Proceedings

I. **Evaluation of decarbonization strategies for existing ships**

Karatuğ Ç., Arslanoğlu Y., Guedes Soares C.

6th International Conference on Maritime Technology and Engineering, Lisbon, Portugal, 24 - 26 May 2022

II. **Maintenance strategies for machinery systems of autonomous ships**

Karatuğ Ç., Arslanoğlu Y., Guedes Soares C.

6th International Conference on Maritime Technology and Engineering, Lisbon, Portugal, 24 - 26 May 2022

III. **Ammonia, And Methanol as a Marine Fuel,**

KARATUĞ Ç., CEYLAN B. O., ARSLANOĞLU Y.

4th Global Conference on Innovation in Marine Technology and the Future of Maritime Transportation (GMC'21), Turkey, 18 - 19 November 2021

IV. **Analysis of Ship Fuel Consumption Through Multiple Linear Regression**

Karatuğ Ç., Arslanoğlu Y.

5th International Mediterranean Science and Engineering Congress (IMSEC 2020), Antalya, Turkey, 21 - 23 October 2020, pp.268-272

V. **Data-Driven Approach For Estimation Of Marine Vessel's Fuel Oil Consumption**

KARATUĞ Ç., UYANIK T., ARSLANOĞLU Y.

9th International Conference on Advanced Technologies (ICAT'xx20), Turkey, 10 August 2020

VI. **The Effect of Ship's Body And Propeller Condition on The Energy Efficiency of The Marine Vessels**

Karatuğ Ç., Arslanoğlu Y.

5th International Mediterranean Science and Engineering Congress (IMSEC 2020), Antalya, Turkey, 21 October 2020, pp.176-180

VII. **Data Driven Approach for Estimation of Marine Vessel'xxs Fuel Oil Consumption**

KARATUĞ Ç., UYANIK T., ARSLANOĞLU Y.

9th International Conference on Advanced Technologies (ICAT'xx20), İstanbul, Turkey, 10 - 12 August 2020

VIII. **Ship Electrical Power Estimation with Machine Learning**

UYANIK T., KARATUĞ Ç., ARSLANOĞLU Y.

9th International Conference on Advanced Technologies (ICAT'xx20), İstanbul, Turkey, 10 - 12 August 2020

IX. **A Review of The Use of Solar Energy in Ships**

KARATUĞ Ç., DURMUŞOĞLU Y.

ECRES2018, 25 - 27 June 2018

## Supported Projects

Arslanoğlu Y., Karatuğ Ç., Project Supported by Higher Education Institutions, Gemi Makine Dairesi Bakım İşlemlerinin

Verimlilik Analizi, 2021 - Continues

Durmuşođlu Y., Karatuđ Ç., Project Supported by Higher Education Institutions, Yk Gemilerinde Gneş pili Uygulamalarının Fizibilite Arařtırması, 2018 - 2020

## **Metrics**

Publication: 18

Citation (WoS): 57

Citation (Scopus): 72

H-Index (WoS): 3

H-Index (Scopus): 4