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Üniversitesi, Gemi İnşaatı ve
Gemi Makineleri Mühendisliği
Bölümü, Barbaros Bulvarı,
Beşiktaş, İstanbul

**International Researcher
IDs**

ScholarID: OznWdSQAAAAJ

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6403

Publons / Web Of Science

ResearcherID: V-1474-2019

ScopusID: 57190396040

Yoksis Researcher ID: 22546



Biography

I enrolled in 2007 at the Yıldız Technical University Faculty of Naval Architecture and Marine Engineering, where I graduated in 2011. During my undergraduate studies, I attended the Department of Mechanical Engineering at the University of Applied Sciences Dusseldorf and the Department of Mechanical Engineering at Kiel University of Applied Sciences as a visiting student. I earned my master's degree in the same department in 2013. In August 2019, I completed my doctoral dissertation, titled "Performance and Size Moving Systems: Constructal Law," the same year I started it. Between January 2017 and April 2018, I was a visiting researcher at the Department of Mechanical Engineering and Materials Science (MEMS) at Duke University. After working as an R&D engineer at Istanbul Metro from 2011 to 2012, I began work as a research assistant at the Department of Naval Architecture and Marine Engineering at Yıldız Technical University and as an Assistant Professor in the same department. Since November 2023, I have worked as an associate professor in the same department. Between August 2021 and August 2022, I was a visiting professor at Duke University.

Learning Knowledge

Post Doctorate
2021 - 2022

Duke University, Pratt School of Engineering, Duke Mechanical Engineering and
Materials Science, United States Of America

Doctorate
2013 - 2019

Yildiz Technical University, Graduate School Of Natural And Applied Sciences,
Turkey

Postgraduate
2011 - 2013

Yildiz Technical University, Graduate School Of Natural And Applied Sciences,
Turkey

Undergraduate
2007 - 2011

Yildiz Technical University, Graduate School Of Natural And Applied Sciences,
Turkey

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Performance and size in Moving Systems: Constructal Law, Yildiz Technical University, Naval Architecture And Maritime Faculty, Department Of Naval Architecture And Marine Engineering, 2019

Postgraduate, Analysis of Waste Heat Recovery System on Ships in Terms of Technic and Economic, Yildiz Technical University, Naval Architecture And Maritime Faculty, Department Of Naval Architecture And Marine Engineering, 2013

Academic Titles / Tasks

Associate Professor
2023 - Continues

Yildiz Technical University, Naval Architecture And Maritime Faculty, Department
Of Naval Architecture And Marine Engineering

Assistant Professor
2020 - 2023

Yildiz Technical University, Naval Architecture And Maritime Faculty, Department
Of Naval Architecture And Marine Engineering

Research Assistant
2012 - 2019

Yildiz Technical University, Naval Architecture And Maritime Faculty, Department
Of Naval Architecture And Marine Engineering

Supported Projects

1. Üçer H. İ., Güneş Ü., Municipality, Islam Düşünce Atlası, 2019 - 2022
2. Sunar L., Güneş Ü., Paköz M. Z., Akin M. H., Municipality, Şehir Gelişim Endeksi, 2020 - 2021
3. Rocha L. A. O., Güneş Ü., Other International Funding Programs, Marine Propulsion Aided by Coanda Effect, 2019 - 2021
4. Sunar L., Güneş Ü., Kömürcüoğlu M., Çolak Y., Municipality, Akıllı Şehir Olgunluk Modeli, 2019 - 2019
5. Arıkan Özden Y., Güneş Ü., Altunsaray E., Türkmen S., Alkan A. D., Project Supported by Other Private Institutions, Energy Efficient Hull Form Design for A Pleasure Boat Powered by A Solar-Hydrogen Energy System , 2009 - 2012

Scholarships

2219 Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TÜBİTAK, 2021 - 2022

2214-A International Research Fellowship Programme for PhD Students, TÜBİTAK, 2017 - 2018

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Evolution and irreversibility: Two distinct phenomena and their distinct laws of nature**
Bejan A., Almahmoud H., GÜNEŞ Ü., Fakhari H., Mardanpour P.
Physics of Life Reviews, vol.50, pp.103-116, 2024 (SCI-Expanded)
2. **Freedom, design and evolution**
Bejan A., Güneş Ü., Grisolia G., Lucia U., Baciú D.
International Communications in Heat and Mass Transfer, vol.156, 2024 (SCI-Expanded)
3. **Constructal law in energy transport and utilization**
Gunes Ü.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.156, pp.107591, 2024 (SCI-Expanded)
4. **Locomotion rhythm makes power and speed**
Bejan A., GÜNEŞ Ü., Almahmoud H.
Scientific Reports, vol.13, no.1, 2023 (SCI-Expanded)
5. **Evolutionary design with freedom - Fin shapes and entrance length channels for heat sinks**
Bejan A., Almahmoud H., GÜNEŞ Ü.
International Communications in Heat and Mass Transfer, vol.147, 2023 (SCI-Expanded)
6. **Social sciences and energy research interactions**
GÜNEŞ Ü.
Philosophical transactions. Series A, Mathematical, physical, and engineering sciences, vol.381, no.2252, pp.20220283, 2023 (SCI-Expanded)
7. **Thermodynamics 2.0: Bridging the natural and social sciences**
Poudel R., MCGOWAN J., GEORGIEV G. Y., HAVEN E., GÜNEŞ Ü., ZHANG H.
Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, vol.381, no.2252, 2023 (SCI-Expanded)
8. **Estimating bulk carriers' main engine power and emissions**
GÜNEŞ Ü.
Brodogradnja, vol.74, no.1, pp.85-98, 2023 (SCI-Expanded)
9. **Evolutionary design for sustainability during climate change**
Bejan A., Gunes U.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.139, 2022 (SCI-Expanded)
10. **Ventilation through a single port**
Bejan A., Almahmoud H., Gunes U.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.138, 2022 (SCI-Expanded)
11. **Virus spreading and heat spreading**
Bejan A., Gunes U.
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.174, 2022 (SCI-Expanded)
12. **Analysis of geometric and non-geometric parameters in a Coanda device for marine applications**
El Halal Y. B., Marques C. H., Lemos R. d. L., GÜNEŞ Ü., Rocha L. A. O., Isoldi L. A., dos Santos E. D.
OCEAN ENGINEERING, vol.244, 2022 (SCI-Expanded)
13. **University Rankings: Quality, Size and Permanence**
Bejan A., Gunes Ü., ŞAHİN B.
European Review, vol.28, no.4, pp.537-558, 2020 (SSCI)
14. **Energy theory of periodic economic growth**
Bejan A., Errera M. R., GÜNEŞ Ü.
International Journal of Energy Research, vol.44, no.7, pp.5231-5242, 2020 (SCI-Expanded)
15. **The evolution of air and maritime transport**
Bejan A., Güneş Ü., Şahin B.
APPLIED PHYSICS REVIEWS, vol.6, no.2, 2019 (SCI-Expanded)
16. **Social organization: The thermodynamic basis**
Bejan A., Gunes U., ERRERA M. R., ŞAHİN B.

- INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.42, no.12, pp.3770-3779, 2018 (SCI-Expanded)
17. **The fastest animals and vehicles are neither the biggest nor the fastest over lifetime**
Bejan A., Gunes U., Charles J. D., Şahin B.
SCIENTIFIC REPORTS, vol.8, 2018 (SCI-Expanded)
 18. **Performance analysis of Multipurpose Refrigeration System (MRS) on fishing vessel**
ÜST Y., Karakurt A. S., Gunes Ü.
Polish Maritime Research, vol.23, no.2, pp.48-56, 2016 (SCI-Expanded)

Articles Published in Other Journals

1. **Recent progress of electromagnetic wave absorbers: A systematic review and bibliometric approach**
Aknay Y., GÜNEŞ Ü., Çolak B., Cetin T.
ChemPhysMater, vol.2, no.3, pp.197-206, 2023 (Scopus)
2. **Educational Technology: A Bibliometric Approach**
GÜNEŞ Ü., TONBULOĞLU B., TONBULOĞLU İ., YILDIRIM K., KARATAŞ İ. H.
Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, vol.57, no.57, pp.1-31, 2023 (Peer-Reviewed Journal)
3. **Evolution of steam turbines: A bibliometric approach**
KARAKURT A. S., ÖZSARI İ., BAŞHAN V., GÜNEŞ Ü.
Journal of Thermal Engineering, vol.8, pp.681-690, 2022 (Scopus)
4. **Predicting Tanker Main Engine Power Using Regression Analysis and Artificial Neural Networks**
GÜNEŞ Ü., BAŞHAN V., ÖZSARI İ., KARAKURT A. S.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, 2022 (ESCI)
5. **Bibliometric Analysis for the Field of Ocean Engineering**
Güneş Ü.
Gemi ve Deniz Teknolojisi, vol.27, no.219, pp.124-141, 2021 (Peer-Reviewed Journal)
6. **Akış Sistemleri: Yapay Zekâ ve Kişiselleştirilmiş Eğitime Bir Bakış**
GÜNEŞ Ü.
Uluslararası Maarif Dergisi, vol.1, no.1, pp.44-47, 2020 (Non Peer-Reviewed Journal)
7. **Sosyoekonomik Eşitsizlikler ve Tabakalaşma Araştırmalarının Gelişimi: Bibliyometrik Bir Analiz**
SUNAR L., GÜNEŞ Ü.
İnsan Toplum, vol.10, no.4, pp.505-555, 2020 (ESCI)
8. **A NEW APPROACH FOR EVALUATING THE RANKINE CYCLE THROUGH ENTROPY GENERATION**
KARAKURT A. S., GÜNEŞ Ü.
JOURNAL OF THERMAL ENGINEERING, vol.5, no.6, pp.141-148, 2019 (ESCI)
9. **Hayvanlar ve araçlarda hız ve boyut ilişkisinin analizi için bir mühendislik yaklaşımı**
Şahin B., Güneş Ü.
Mimar ve Mühendis Dergisi, pp.66-68, 2018 (Non Peer-Reviewed Journal)
10. **Tabiatın taklidi mi yoksa tabiatın prensipleri mi?**
Güneş Ü.
Hendese Bilim Teknoloji ve Düşünce Dergisi, pp.74-79, 2018 (Non Peer-Reviewed Journal)
11. **Performance Analysis of a Steam Turbine Power Plant at Part Load Conditions**
Karakurt A. S., Güneş Ü.
JOURNAL OF THERMAL ENGINEERING, vol.3, no.2, pp.1121-1128, 2017 (Scopus)
12. **Exergy And Economic Analysis Of Dual Pressure Waste Heat Recovery Boiler**
Güneş Ü., Karakurt A. S.
International Journal of Advances in Mechanical and Civil Engineering, vol.2, no.5, pp.41-43, 2015 (Peer-Reviewed Journal)
13. **Buharın Gücü**
GÜNEŞ Ü.

Books & Book Chapters

- 1. Advanced oxidation process a bibliometric approach**
Biswal P., Güneş Ü., Awad M. M.
in: Advanced Oxidation Processes for Micropollutant Remediation, Mohammad Khalid, Yuri Park, Rama Rao Karri, Rashmi Walvekar, Editor, CRC, New York, New York, pp.215-227, 2024
- 2. Proceedings 12th of the Constructal Law Conference**
Güneş Ü. (Editor), Bejan A. (Editor), Lucia U. (Editor), Grisolia G. (Editor), Morega A. (Editor)
Yıldız Teknik Üniversitesi, İstanbul, 2023
- 3. Evolution of heat transfer in phase change material**
SENTHILRAJA S., GÜNEŞ Ü., AWAD M. M.
in: Phase change materials for heat transfer, Hafız Muhammad Ali, Editor, Elsevier, pp.249-265, 2023
- 4. Karşılaştırmalı Veriler Temelinde Şehirlerin Görünümü**
GÜNEŞ Ü.
in: Müreffeh Şehir: Dengeli ve Daimi Bir Gelişim, Sunar Lütfi, Editor, Matbu Kitap, Matbu Kitap, pp.123-150, 2023
- 5. Veriler ve Göstergeler Işığında Konya**
GÜNEŞ Ü., AKIN M. H., SUNAR L.
in: Konya: Bir Şehir Gelişimi], Sunar Lütfi, Güleç Selim Yücel, Editor, Konya Büyükşehir Belediyesi Kültür Yayınları, Konya, pp.179-231, 2022
- 6. Proceeding of V. Turkey Graduate Studies Conference (TLCK)**
Yavaş E. S. (Editor), Güneş Ü. (Editor)
, İstanbul, 2016
- 7. Proceeding of IV. Turkey Graduate Studies Conference (TLCK)**
Dinçer H. (Editor), Güneş Ü. (Editor)
Dumlupınar Üniversitesi, İstanbul, 2015
- 8. Proceeding of III. Turkey Graduate Studies Conference (TLCK)**
Kayar N. (Editor), Güneş Ü. (Editor)
Sakarya Üniversitesi Basımevi Müdürlüğü, Sakarya, 2014
- 9. Proceeding of II. Turkey Graduate Studies Conference (TLCK)**
Güneş Ü.
Bursa Büyükşehir Belediyesi, Bursa, 2013
- 10. Proceeding of I. Turkey Graduate Studies Conference (TLCK)**
Yıldız F., Güneş Ü. (Editor)
Konya Büyükşehir Belediyesi, Konya, 2012

Refereed Congress / Symposium Publications in Proceedings

- 1. Sustainable Maritime Data-Based Developments**
GÜNEŞ Ü.
4th International Naval Architecture and Maritime Symposium (INT-NAM 2023), İstanbul, Turkey, 23 December 2023
- 2. Constructal flow of constructal thinking**
Baciu D. C., Kajarekarb S., GÜNEŞ Ü.
Constructal Law Conference 2023, Torino, Italy, 21 September 2023
- 3. Constructal Network of Maritime Transportation**
GÜNEŞ Ü., EKMEKÇİ İ.
Constructal Law Conference 2023, Torino, Italy, 21 September 2023

4. **An analysis of mechanical engineering studies**
GÜNEŞ Ü.
The 2nd World Energy Storage Conference (WESC-2022), İstanbul, Turkey, 14 December 2022
5. **Emission studies in ocean engineering**
GÜNEŞ Ü.
International Eurasian Conference on Science, Engineering and Technology (Eurasiansciencetech 2022), Ankara, Turkey, 14 December 2022
6. **The evolution of engineering**
GÜNEŞ Ü.
Thermodynamics 2.0 | 2022, Boone, NC, United States Of America, 18 July 2022
7. **Kuzey Kutup Hattında Çalışan Bir Gemiye Ait Soğutma Sisteminin Enerji ve Ekserji Analizleri**
Karakurt A. S., Güneş Ü.
22nd Congress on Thermal Science and Technology (CTST 2019), Kocaeli, Turkey, 11 - 14 September 2019, pp.1-6
8. **The effect of size on entropy generation for waste heat recovery boiler**
Güneş Ü., Karakurt A. S., Şahin B.
The 32nd International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems (ECOS 2019), Wroclaw, Poland, 23 - 28 June 2019, pp.809-818
9. **Constructal Timeline**
GÜNEŞ Ü., ŞAHİN B.
Constructal Law Second Law Conference 2019, Porto-Alegre, Brazil, 11 - 13 March 2019, pp.151-154
10. **World constructal network of scientific publications, coauthorship and citations**
RAZERA A. L., SANTOS E. d., ISOLDI L. A., ERRERA M. R., GÜNEŞ Ü., ROCHA L. A. O.
Constructal Law Second Law Conference 2019, Porto-Alegre, Brazil, 11 - 13 March 2019, pp.155-159
11. **Exergetic Performance Analysis of Fishing Vessel Refrigeration System**
Karakurt A. S., Güneş Ü.
2nd International Congress on Energy Systems (ICES-2016), İstanbul, Turkey, 22 December 2016, pp.1-10
12. **Balıkçı Gemisi Soğutma Sisteminin Birinci Yasa Analizleri**
Karakurt A. S., Güneş Ü.
1. Uluslararası Gemi ve Deniz Teknolojisi Kongresi (GMO-SHIPMAR), İstanbul, Turkey, 8 - 09 December 2016
13. **Balıkçı Teknesi Soğutma Sisteminin Ekserji Analizleri**
KARAKURT A. S., GÜNEŞ Ü.
1st International Congress on Ship and Marine Technology, İstanbul, Turkey, 8 - 09 December 2016, vol.1
14. **Performance Analysis of a Steam Power Plant with District Heating**
Köroğlu T., Karakurt A. S., Güneş Ü.
29th International Conference on Efficiency, Cost, Optimisation, Simulation and Environmental Impact of Energy Systems (ECOS 2016)., Postojna, Slovenia, 19 - 23 June 2016
15. **Exergetic and economic analysis of subcooling & superheating effect on vapor compression refrigeration system**
KARAKURT A. S., GÜNEŞ Ü., ÜST Y.
ASME 2016 Power Conference, POWER 2016, collocated with the ASME 2016 10th International Conference on Energy Sustainability and the ASME 2016 14th International Conference on Fuel Cell Science, Engineering and Technology, North-Carolina, United States Of America, 26 - 30 June 2016
16. **Performance Analysis of Turbocharged 2-Stroke Diesel Engine**
Güneş Ü., Üst Y., Karakurt A. S.
1st International Conference on Engineering and Natural Sciences, Skopje, Macedonia, 15 - 19 May 2015, vol.1, pp.656-664
17. **Exergetic Performance Analyses of Natural Gas Liquefaction Processes**
KARAKURT A. S., GÜNEŞ Ü., ÜST Y.
INT-NAM 2014 2st International Symposium on Naval Architecture and Maritime, İstanbul, Turkey, 23 - 24 October 2014, vol.1, pp.235-247
18. **Organik Rankin Çevrimi Teknolojisi ve Gemilerde Uygulanma Alanı**

GÜNEŞ Ü.

Gemi İnşaatı ve Deniz Teknolojisi Teknik Kongresi 2012, 01 December 2012, pp.487-493

19. **Cooling System Design for a Fuel Cell Powered Pleasure Boat 1st International Symposium on Naval Architecture and Maritime**

ARIKAN ÖZDEN Y., ÇELİK F., GÜNEŞ Ü.

1st International Symposium on Naval Architecture and Maritime, İstanbul, Turkey, 24 - 25 October 2011, vol.1, pp.119-124

Academic and Administrative Experience

2022 - 2024	Deputy Head of Department	Yildiz Technical University, Naval Architecture And Maritime Faculty, Department Of Naval Architecture And Marine Engineering
2020 - 2021	Deputy Head of Department	Yildiz Technical University, Naval Architecture And Maritime Faculty, Department Of Naval Architecture And Marine Engineering

Courses

Seminar, Postgraduate, 2022 - 2023

Ship Machinery I, Undergraduate, 2022 - 2023

Basic Computer Science, Undergraduate, 2020 - 2021

Technical Thermodynamics II, Undergraduate, 2020 - 2021

Technical Thermodynamics I, Undergraduate, 2020 - 2021

Advising Theses

Güneş Ü., Bejan A., Evolutionary Design with Freedom and Rhythm for Heat Transfer, Strength, and Power Utilization, Doctorate, H.Almahmoud(Student), 2024

Activities in Scientific Journals

SeaTific Journal, First Editor, 2023 - Continues

Gemi ve Deniz Teknolojisi, Editor, 2021 - Continues

Journal of Thermal Engineering, Editor, 2021 - Continues

Memberships / Tasks in Scientific Organizations

Foundation for Science Culture and Education (ILKE), Board Member, 2018 - Continues, Turkey

The Royal Institution of Naval Architects (RINA), Member, 2016 - Continues, United Kingdom

American Society of Mechanical Engineers (ASME), Member, 2016 - Continues, United States Of America

Turkish Chamber of Naval Architects and Marine Engineers (GMO), Member, 2011 - Continues, Turkey

Tasks In Event Organizations

Güneş Ü., 12th Constructal Law Conference - Freedom. Design and Evolution (2023), Scientific Congress, Turin, Italy, Eylül 2023

Güneş Ü., 12th International Conference on Mechanical Engineering 2022 (TSME-ICoME 2022), Scientific Congress, Thailand, Aralık 2022

Güneş Ü., Thermodynamics 2.0, Scientific Congress, North Carolina, United States Of America, Temmuz 2022

Güneş Ü., 2nd International Congress On Ship and Marine Technology, Scientific Congress, İstanbul, Turkey, Eylül 2021

Güneş Ü., 5th International Students Social Sciences Congress, Scientific Congress, Trabzon, Turkey, Kasım 2019

Karakurt A. S., GÜNEŞ Ü., World Energy Strategies Congress and Exhibition 2019 (WESCE'19), Scientific Congress, İstanbul, Turkey, Ağustos 2019

Güneş Ü., Constructal Law & Second Law Conference 2019, Scientific Congress, Porto-Alegre, Brazil, Mart 2019

Güneş Ü., 4th International Students Social Sciences Congress, Scientific Congress, Nevşehir, Turkey, Kasım 2018

Güneş Ü., 7. Turkish Postgraduate Studies Conference (TLCK), Scientific Congress, Burdur, Turkey, Mayıs 2018

Güneş Ü., 6. Turkish Postgraduate Studies Conference (TLCK), Scientific Congress, Muş, Turkey, Mayıs 2017

Güneş Ü., V. Turkish Postgraduate Studies Conference (TLCK), Scientific Congress, Isparta, Turkey, Mayıs 2016

Güneş Ü., III. International ILEM Summer School, Science / Art Camp or Summer School Organization, Konya, Turkey, Ağustos 2015

Güneş Ü., IV. Turkish Postgraduate Studies Conference (TLCK), Scientific Congress, Kütahya, Turkey, Mayıs 2015

Güneş Ü., III. Turkish Postgraduate Studies Conference (TLCK), Scientific Congress, Sakarya, Turkey, Mayıs 2014

Metrics

Publication: 61

Citation (WoS): 38

Citation (Scopus): 101

H-Index (WoS): 3

H-Index (Scopus): 5

Research Areas

Thermodynamics, Thermal Systems, Naval Architecture and Marine Engineering, Ship Machines, Engineering and Technology

Non Academic Experience

Duke Üniversitesi

Duke Üniversitesi

Other Public Institution, İstanbul Ulaşım AŞ.

İstanbul Ulaşım AŞ.