

## **Asst. Prof. Yalçın Durmuşoğlu**

### **Personal Information**

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### **International Researcher IDs**

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Publons / Web Of Science ResearcherID: AAC-2491-2020

ScopusID: 23024477300

Yoksis Researcher ID: 150761

### **Education Information**

Doctorate, Yıldız Technical University, Naval Architecture And Maritime Faculty, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, Turkey 2009 - 2013

Postgraduate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Makine Mühendisliği, Isı Proses (YI) (Tezli), Turkey 2001 - 2003

### **Foreign Languages**

English, B1 Intermediate

### **Dissertations**

Doctorate, Gaz türbinlerinin termoeconomik performansına etki eden parametrelerin analizi ve optimizasyonu, Yıldız Teknik Üniversitesi, Gemi İnşaatı Ve Denizcilik Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, 2013  
Postgraduate, İçten yanmalı bir gemi motorunda silindir içindeki proseslerin termodinamik simülasyonu, Yıldız Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği, Isı Proses (YI) (Tezli), 2003

### **Research Areas**

Technical Sciences, Computer Sciences, Computer Vision, 3D Impressions, Mechanical Engineering, Energy, Alternative Energy Resources, Solar energy, Thermodynamics, Heat and Mass Transfer, Internal Combustion Engines, Thermal machines, Naval Architecture and Marine Engineering, Ship Machines

### **Academic Titles / Tasks**

Assistant Professor, Istanbul Technical University, Gemi Makineleri İşletme Mühendisliği Bölümü, 2015 - Continues

Assistant Professor, Istanbul Technical University, Denizcilik Fakültesi, Gemi Makineleri İşletme Mühendisliği Bölümü, 2015 - 2018

Research Assistant, Istanbul Technical University, Denizcilik Fakültesi, Gemi Makineleri İşletme Mühendisliği Bölümü, 2001 - 2015

## Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Denizcilik Fakültesi, Gemi Makineleri İşletme Mühendisliği Bölümü, 2015 - Continues

## Courses

Buhar & Gaz Türbinleri Operas., Undergraduate, 2017 - 2018  
Oper. of Steam & Gas Turbines, Undergraduate, 2017 - 2018  
Gemi Dizel Makineleri III, Undergraduate, 2017 - 2018  
Bilgisayar Destekli Teknik Resim, Undergraduate, 2016 - 2017, 2015 - 2016  
Operation Steam and Gas Turbine, Undergraduate, 2016 - 2017  
Makine Elemanları, Undergraduate, 2016 - 2017, 2015 - 2016

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

- I. **Design of a solar photovoltaic system for a Ro-Ro ship and estimation of performance analysis: A case study**  
Karatuğ Ç., Durmuşoğlu Y.  
Solar Energy, vol.207, pp.1259-1268, 2020 (SCI-Expanded)
- II. **Improving competitiveness level of Turkish intermodal ports in the Frame of Green Port Concept: a case study**  
Aksoy S., Durmuşoğlu Y.  
MARITIME POLICY & MANAGEMENT, vol.47, no.2, pp.203-220, 2020 (SSCI)
- III. **Energy efficiency analysis of a ship's central cooling system using variable speed pump**  
Koçak G., Durmuşoğlu Y.  
JOURNAL OF MARINE ENGINEERING AND TECHNOLOGY, vol.17, no.1, pp.43-51, 2018 (SCI-Expanded)
- IV. **Thermoeconomic Optimization and Performance Analysis of a Regenerative Closed Brayton Cycle with Internal Irreversibilities and Pressure Losses**  
Durmuşoğlu Y., ÜST Y., KAYADELEN H. K.  
IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY-TRANSACTIONS OF MECHANICAL ENGINEERING, vol.41, no.1, pp.61-70, 2017 (SCI-Expanded)
- V. **Thermodynamic optimization of an irreversible regenerative closed Brayton cycle based on thermoeconomic performance criterion**  
Durmuşoğlu Y., ÜST Y.  
Applied Mathematical Modelling, vol.38, no.21, pp.5174-5186, 2014 (SCI-Expanded)
- VI. **Damage costs of air pollution from ships in the region of the Sea of Marmara**  
Durmuşoğlu Y.  
Naval Engineers Journal, vol.125, no.3, pp.71-85, 2013 (SCI-Expanded)
- VII. **Estimating shipping emissions in the region of the Sea of Marmara, Turkey**  
Deniz C., DURMUSOGLU Y.  
SCIENCE OF THE TOTAL ENVIRONMENT, vol.390, no.1, pp.255-261, 2008 (SCI-Expanded)
- VIII. **Efficient power analysis for an irreversible Carnot heat engine**  
YILMAZ T., Durmuşoğlu Y.  
International Journal of Energy Research, vol.0, 2008 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Investigation of Long-term Sea Training Problem of Maritime Students in Turkey**  
KOÇAK G., DURMUŞOĞLU Y.  
Akdeniz Eğitim Araştırmaları Dergisi, vol.12, no.26, pp.217-232, 2018 (Peer-Reviewed Journal)

- II. **Gemilerde verimi arttırmak için uygulanan yöntemlerin CO2 emisyonlarını azaltmaya yönelik etkilerinin analizi**  
TALAY A. A., DENİZ C., DURMUŞOĞLU Y.  
Journal of ETA Maritime Science, vol.2, no.1, pp.61-74, 2014 (ESCI)
- III. **Gemilerde verimi arttırmak için uygulanan yöntemlerin CO2 emisyonlarını azaltmaya yönelik etkilerinin analizi**  
Talay A. A., Deniz C., DURMUSOGLU Y.  
JOURNAL OF ETA MARITIME SCIENCE, no.2, pp.61-47, 2014 (ESCI)
- IV. **EFFECT ANALYSIS AND OPTIMIZATION OF IRREVERSIBILITIES OF EKSERGOECONOMIC COST ON A GAS TURBINE POWER PLANT**  
DURMUŞOĞLU Y., ÜST Y.  
Sigma, vol.31, pp.263-281, 2013 (Peer-Reviewed Journal)
- V. **Gemi makine dairesi simülatörlerinin denizcilik eğitiminde etkin kullanılmasına ait bir metot**  
DURMUSOGLU Y., Deniz C.  
Gemi ve Deniz Teknolojisi, no.169, pp.17-24, 2006 (Peer-Reviewed Journal)

## **Books & Book Chapters**

- I. **Teknik Resim I**  
DURMUŞOĞLU Y., EMİR A. S.  
İTÜ Denizcilik Fakültesi Matbaası, İstanbul, 2004

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **A Review of The Use of Solar Energy in Ships**  
KARATUĞ Ç., DURMUŞOĞLU Y.  
ECRES2018, 25 - 27 June 2018
- II. **Importance and Legal Basis of Seafarers Simulator Training**  
DURMUŞOĞLU Y., KOÇAK G.  
ICEMST 2018, 28 April - 01 May 2018
- III. **A NECESSARY AND INNOVATIVE TECHNOLOGY FOR SHIPS: 3D PRINTERS**  
KOÇAK G., DURMUŞOĞLU Y.  
ICRES 2018, 28 April - 01 May 2018
- IV. **A Study on Improving Competitiveness Level of Turkish Ports in The Frame of Green Port Concept**  
AKSOY S., DURMUŞOĞLU Y.  
IconTES 2017, 26 - 29 October 2017
- V. **Integration of Innovative Technologies to Engineering Education: 3D Printers**  
Durmuşoğlu Y., Koçak G.  
International Conference on Education in Mathematics, Science&Technology (ICEMST), Aydın, Turkey, 18 - 21 May 2017, pp.356-359
- VI. **Improving Efficiency of Operational Education by Using Virtual Reality**  
Koçak G., Durmuşoğlu Y.  
Education Research Highlights in Mathematics, Science and Technology (ICRES 2017), Aydın, Turkey, 18 - 21 May 2017, pp.62
- VII. **A study of renewable energy in a port facility by using solar organic rankine cycle systems**  
DURMUSOGLU Y., Aksoy S., Deniz C.  
2nd International Conference on Engineering and Natural Sciences (ICENS 2016), Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2016, pp.755-763
- VIII. **Advanced Education Technology Virtual Reality Simulation for Marine Fire Fighting Training**

Durmuşoğlu Y., Koçak G.

International Conference on Education in Mathematics, Science & Technology (ICEMST 2016), Muğla, Turkey, 19 - 22 May 2016, pp.1063-1069

**IX. Utilization of Marine Full Mission Engine Room Simulator for Research Purpose**

Koçak G., Durmuşoğlu Y.

International Conference on Research in Education and Science (ICRES 2016), Muğla, Turkey, 19 - 22 May 2016, pp.1636-1641

**X. Gemiadamlarının Yangınla Mücadele Eğitimleri**

Durmuşoğlu Y., Koçak G.

Yangın ve Güvenlik Sempozyumu ve Sergisi (TÜYAK2015), İstanbul, Turkey, 12 - 13 November 2015, pp.300-305

**XI. Energy efficiency analysis of pump systems in a ship power plant and a case study of a container ship**

DURMUSOGLU Y., Koçak G., Deniz C., Zincir B.

16th Annually General Assembly of International Associations of Maritime Universities (IAMU), Opatija, Croatia, 7 - 10 October 2015, pp.57-62

**XII. Necessity of mechatronics knowledge in marine engineering education"**

Koçak G., DURMUSOGLU Y., Deniz C.

16th Annually General Assembly of International Associations of Maritime Universities (IAMU), Opatija, Croatia, 7 - 10 October 2015, pp.155-159

**XIII. Exergetic performance analysis of a marine diesel engine exergetic performance analysis of a marine diesel engine**

Deniz C., DURMUSOGLU Y., Koçak G.

Second International Symposium on Naval Architecture and Maritime, İstanbul, Turkey, 23 - 24 October 2014, pp.1-10

**XIV. Exergetic Performance Analysis of a Marine Diesel Engine**

Durmuşoğlu Y., Deniz C., Koçak G.

2nd International Symposium on Naval Architecture and Maritime (INT-NAM 2014), İstanbul, Turkey, 23 - 24 October 2014, pp.1-10

**XV. Gemilerde Verimi Arttırmak İçin Uygulanan Yöntemlerin CO2 Emisyonlarını Azaltmaya Yönelik Etkilerinin Analizi**

TALAY A. A., DENİZ C., DURMUŞOĞLU Y.

TMMOB Gemi Makineleri İşletme Mühendisleri Odası (GEMİMO) V.Ulusal Denizcilik Kongresi, Turkey, 11 December 2013

**XVI. İstanbul Teknik Üniversitesi ITU Gemi Makine Dairesi Simülatörü MDS Geliştirilmesi İçin Yol Haritası**

Çiçek İ., Dere Ç., Durmuşoğlu Y.

V.Ulusal Denizcilik Kongresi (GEMİMO), İstanbul, Turkey, 11 November 2013

**XVII. Importance of mechatronics in maritime education**

DURMUSOGLU Y., Deniz C., Talay A. A.

Korea Institute of Navigation and Port Research Spring Conference 2012, Gyeongju, South Korea, 21 - 23 June 2012, pp.110-112

**XVIII. Analyzing of air pollution in last decade for maritime transportation based on tanker traffics in Turkish straits**

DURMUSOGLU Y., Deniz C., Talay A. A.

12. International Combustion Symposium, Kocaeli, Turkey, 24 - 26 May 2012, pp.182-187

**XIX. Analyzing the Effects of Ships in Ballast Water Passing the Turkish Straits**

Satır T., Deniz C., Durmuşoğlu Y., Bal Beşikçi E.

Hydrology Conference 2010 The Changing Physical and Social Environment: Hydrologic Impacts and Feedbacks, San Diego, United States Of America, 11 - 13 October 2010, pp.400-405

**XX. Ricardo test motorunun bilgisayarla kontrolü ve sürtünme deneyi**

Deniz C., DURMUSOGLU Y., KILIC A.

11th International Combustion Symposium, Sarajevo, Bosnia And Herzegovina, 24 - 27 June 2010

- XXI. **Rikardo test motorunun bilgisayar kontrolü ve sürtünme deneyi**  
KILIÇ A., DURMUŞOĞLU Y., DENİZ C.  
11. Uluslararası Yanma Sempozyumu, 24 - 27 June 2010, pp.1
- XXII. **Yeni iklim rejiminin denizcilik sektörüne getirmesi muhtemel fırsatlar ve engeller**  
KILIÇ A., DENİZ C., DURMUŞOĞLU Y.  
IV. Ulusal Sempozyumu (GEMİMO), Turkey, 13 November 2009, pp.1
- XXIII. **Gemilerden Kaynaklanan Egzoz Emisyonları ve Azaltma Yöntemleri**  
KILIÇ A., DENİZ C., DURMUŞOĞLU Y.  
IV. Ulusal Sempozyumu, Turkey, 13 November 2009
- XXIV. **Mekatronik ve denizcilik eğitimindeki önemi**  
Deniz C., Talay A. A., KILIÇ A., DURMUSOGLU Y.  
TMMOB Gemi Makineleri İşletme Mühendisleri Odası IV. Ulusal Sempozyumu, İstanbul, Turkey, 13 November 2009, pp.107-117
- XXV. **Gemilerde makine sınıfı zabitan açığı ve uzakyol vardiya mühendisliği tamamlama eğitim**  
Talay A. A., Deniz C., DURMUSOGLU Y.  
TMMOB Gemi Makineleri İşletme Mühendisleri Odası IV. Ulusal Sempozyumu, İstanbul, Turkey, 13 November 2009, pp.26-44
- XXVI. **Gemilerde Makine Sınıfı Zabitan Açığı ve Uzakyol Vardiya Mühendisliği Tamamlama Eğitimi**  
TALAY A. A., DENİZ C., DURMUŞOĞLU Y.  
IV. Ulusal Denizcilik Sempozyumu (GEMİMO), Turkey, 13 November 2009
- XXVII. **The annual exhaust gas emissions from Turkish flagged ship fleet**  
KILIÇ A., Deniz C., DURMUSOGLU Y., Çetin B.  
13 th Congress of Intl. Maritime Assoc. of Mediterranean IMAM 2009, İstanbul, Turkey, 12 - 15 October 2009, pp.863-866
- XXVIII. **A novel power generation system analysis of marine power plant Trigeration**  
DURMUŞOĞLU Y., DENİZ C., KILIÇ A.  
13th Congress International Maritime Association of Mediterranean, 12 - 15 October 2009
- XXIX. **Analyzing of Shipping Emission and Growth Rate on the Turkish Straits**  
Satır T., Deniz C., Durmuşoğlu Y.  
15th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region, Bari, Italy, 7 - 11 October 2009, pp.239
- XXX. **Analyzing of shipping emission and growth rate on the Strait of Istanbul**  
DENİZ C., SATIR T., DURMUŞOĞLU Y.  
15th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region (MESAEP), 7 November - 11 September 2009
- XXXI. **Estimation of CO2 emissions from merchant ships in Marmara sea Türkiye 1999 2008**  
DENİZ C., DURMUŞOĞLU Y., KILIÇ A.  
Global Conference on Global Warming 2009, 5 - 09 July 2009
- XXXII. **Güneş enerjili absorpsiyonlu LiBr/ H2O soğutma ısıtma sistemi**  
ATA A., ÖKTEM A. S., DURMUŞOĞLU Y.  
10th International Combustion Symposium, 9 - 10 November 2008
- XXXIII. **The Effects of Ergonomics Design Principles to Engine Room Simulator and Marine Engineering Education**  
KOÇAK G., DENİZ C., DURMUŞOĞLU Y.  
3rd International Conference ERGONOMICS 2007, 13 - 16 June 2007
- XXXIV. **The effect of ergonomics design principles to engine room simulator and marine engineering education**  
Koçak G., Deniz C., Durmuşoğlu Y.  
3rd International Ergonomics Conference, Ergonomics 2007, Zagreb, Croatia, 13 - 16 June 2007, pp.52-60
- XXXV. **Estimation of Emissions from Ships on the Sea of Marmara and Turkish Straits and Its Effect**  
Deniz C., Durmuşoğlu Y., Kılıç A., Koçak G.

9th International Combustion Symposium, Kırıkkale, Turkey, 16 - 17 November 2006, pp.728-744

- XXXVI. **The New Mimic Panel And Its Effects on Simulator Education of Marine Engineers at ITU Maritime Faculty**

KOÇAK G., DURMUŞOĞLU Y., DENİZ C.

The International Association of Maritime Universities (IAMU), 16 - 18 October 2006

- XXXVII. **The New Mimic Panel and its Effects on Simulator Education of Marine Engineers at ITUMF**

Koçak G., Durmuşoğlu Y., Deniz C., Kuşoğlu A., Hashimoto S.

IAMU AGA 7 Conference, Dalian, China, 15 - 18 September 2006, pp.364-374

- XXXVIII. **Gemi Makine Dairesi Simülatörleri ve Mühendislik Alanında Etkin Kullanımı**

Koçak G., Durmuşoğlu Y., Deniz C., Kuşoğlu A.

II.Ulusal Mühendislik Kongresi, Zonguldak, Turkey, 11 - 13 May 2006, pp.357-367

- XXXIX. **Engine room simulator and using its effect in engineering education**

KOÇAK G., DURMUŞOĞLU Y., DENİZ C.

The 2nd National Congress of Engineering, Turkey, 11 - 13 May 2006, pp.1

- XL. **Gemi Makineleri İşletme Mühendisliği Eğitiminde Kalite ve Akreditasyon**

DURMUSOGLU Y., Koçak G., Deniz C., Kuşoğlu A.

II. Ulusal Mühendislik Kongresi, Zonguldak, Turkey, 11 - 13 May 2006, pp.261-267

- XLI. **A quality of marine engineering education and accreditation**

DURMUŞOĞLU Y., KOÇAK G., DENİZ C.

The 2nd National Congress of Engineering, Turkey, 11 - 13 May 2006, pp.1

- XLII. **Regulations of STCW78 training of seafarers and provide the quality of training**

DENİZ C., DURMUŞOĞLU Y.

The Marine Engineering 2nd National Congress, Turkey, 11 November 2005, pp.1

- XLIII. **A numeric analysis of the effect of parameters of combustion performance in an internal combustion engines Zero dimensional and two combustion region model**

DURMUŞOĞLU Y.

The Marine Engineering 2nd National Congress, Turkey, 11 November 2005, pp.1

- XLIV. **STCW'78 sözleşmesi, gemiadamları eğitimi ve eğitimde kalitenin sağlanması**

Deniz C., Durmuşoğlu Y.

TMMOB Gemi Makineleri İşletme Mühendisleri Odası II. Ulusal Kongresi, İstanbul, Turkey, 02 June 2005, pp.134-142

- XLV. **Gemi Makine Dairesi Simülatörleri, Uygun Simülatörün Seçim Kriterleri ve Eğitimde Etkin Kullanılması**

Deniz C., Kuşoğlu A., Durmuşoğlu Y.

4. Uluslararası Eğitim Teknolojileri Konferansı, Sakarya, Turkey, 24 - 26 November 2004, pp.329-334

- XLVI. **The Engine Room Simulator The Distinguish Criterion of Sensible Simulator and Using Its effective of Training**

DENİZ C., DURMUŞOĞLU Y.

International of Education and Training Congress (IETC), 24 - 26 November 2004

- XLVII. **Models of Emission and Processes in Cylinder An Internal Combustion Engines**

Kesgin U., SAFA A., DURMUŞOĞLU Y.

8th International Combustion Symposium, 8 - 09 September 2004

- XLVIII. **The International Regulation of Fire Fighting on Ships and An Experimental Study of Human Factor of Fire Fighting Training**

DURMUŞOĞLU Y.

8th International Combustion Symposium, 8 - 09 September 2004

- XLIX. **Thermodynamic simulation of marine diesel engine inside of a cylinder processes**

DURMUŞOĞLU Y.

The Marine Engineering 1st National Congress, Turkey, 10 November 2003, pp.1

## **Supported Projects**

Durmuşoğlu Y., Karatuğ Ç., Project Supported by Higher Education Institutions, Yük Gemilerinde Güneş pili Uygulamalarının Fizibilite Araştırması, 2018 - 2020

## **Scientific Refereeing**

DEU Denizcilik Dergisi, National Scientific Refreed Journal, October 2017  
JEMS, National Scientific Refreed Journal, May 2017

## **Metrics**

Publication: 71  
Citation (WoS): 114  
Citation (Scopus): 151  
H-Index (WoS): 4  
H-Index (Scopus): 4

## **Congress and Symposium Activities**

IconTES 2017, Attendee, Antalya, Turkey, 2017  
ICEMST 2017, Attendee, Muğla, Turkey, 2017  
ICRES 2017, Attendee, Turkey, 2017

## **Non Academic Experience**

Aksay Denizcilik  
Rayben Denizcilik  
MAS Pompa A.Ş.  
RABAK Bakır İşletmeleri