

## Asst. Prof. Ali DOĞRUL

### Personal Information

Email: adogrul@yildiz.edu.tr

Web: <https://avesis.yildiz.edu.tr/adogrul>

### International Researcher IDs

ScholarID: T1Ud6-4AAAAJ&hl=tr

ORCID: 0000-0003-3236-555X

Publons / Web Of Science ResearcherID: AAE-1791-2019

ScopusID: 55471334800

### Education Information

Doctorate, Yıldız Technical University, Fen Bilimleri, Gemi İnşası Ve Gemi Makineleri Mühendisliği, Turkey 2010 - 2015

Postgraduate, Yıldız Technical University, Fen Bilimleri, Gemi İnşası Ve Gemi Makineleri Mühendisliği, Turkey 2008 - 2010

Undergraduate, Yıldız Technical University, Makina, Gemi İnşası Ve Gemi Makineleri Mühendisliği, Turkey 2004 - 2008

### Foreign Languages

English, C1 Advanced

Italian, B1 Intermediate

### Dissertations

Doctorate, Gemi Direnci ve Serbest Yüzey Deformasyonlarının Deneysel ve Sayısal Olarak İncelenmesi, Yıldız Teknik Üniversitesi, Gemi İnşası Ve Gemi Makineleri Mühendisliği, Gemi İnşası Ve Gemi Makineleri Mühendisliği, 2015

Postgraduate, İstanbul Boğazı'ndaki Gemi Kaynaklı Kirliliğin Sayısal Olarak İncelenmesi, Yıldız Teknik Üniversitesi, Gemi İnşası Ve Gemi Makineleri Mühendisliği, Gemi İnşası Ve Gemi Makineleri Mühendisliği, 2010

### Research Areas

Naval Architecture and Marine Engineering, Ship Hydromechanics, Ship Construction, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Yıldız Technical University, Naval Architecture And Maritime Faculty, Gemi İnşası Ve Gemi Makineleri Mühendisliği, 2018 - Continues

Assistant Professor, Yıldız Technical University, Naval Architecture And Maritime Faculty, Gemi İnşası Ve Gemi Makineleri Mühendisliği, 2017 - 2018

Research Assistant PhD, Yıldız Technical University, Naval Architecture And Maritime Faculty, Gemi İnşası Ve Gemi Makineleri Mühendisliği, 2015 - 2017

Research Assistant, Yıldız Technical University, Naval Architecture And Maritime Faculty, Gemi İnşası Ve Gemi

Makineleri Mühendisliği, 2009 - 2015

## Academic and Administrative Experience

Misafir Öğretim Üyesi, Naval Academy Command, Naval Academy (Dean's Office), 2017 - 2019

Misafir Araştırmacı, Universita degli studi di Napoli Frederico II, Gemi İnşaatı Mühendisliği, 2012 - 2013

## Courses

Gemi Hareketleri, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Gemi Direnci ve Sevki, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Savaş Gemilerinin Tasarım Esasları, Postgraduate, 2019 - 2020, 2018 - 2019

Savaş Gemileri, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Gemi Direnci, Undergraduate, 2018 - 2019, 2017 - 2018

Sayısal Yöntemler, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Gemi Sevki, Undergraduate, 2018 - 2019, 2017 - 2018

Bilgisayar Destekli Tasarım, Undergraduate, 2018 - 2019, 2017 - 2018

Gemi Geometrisi, Undergraduate, 2016 - 2017

## Advising Theses

Doğrul A., A Numerical Investigation of Flow Around Superstructure of a Surface Combatant, Postgraduate, S.ÖKSÜZ(Student), 2020

## Jury Memberships

Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, June, 2020

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

### I. Scale effect on ship resistance components and form factor

Doğrul A., Song S., Demirel Y. K.

Ocean Engineering, vol.209, pp.1-13, 2020 (SCI-Expanded)

### II. Numerical Prediction of the Vertical Responses of Planing Hulls in Regular Head Waves

KAHRAMANOĞLU E., ÇAKICI F., Dogrul A.

JOURNAL OF MARINE SCIENCE AND ENGINEERING, vol.8, no.6, 2020 (SCI-Expanded)

### III. Investigation of self-propulsion of DARPA Suboff by RANS method

SEZEN S., DOĞRUL A., Delen C., Bal Ş.

OCEAN ENGINEERING, vol.150, pp.258-271, 2018 (SCI-Expanded)

### IV. Backstepping control of nonlinear roll motion for a trawler with fin stabilizer

Demirel H., Doğrul A., Sezen S., Alarçın F.

Transactions of the Royal Institution of Naval Architects Part A: International Journal of Maritime Engineering, vol.159, pp.205-212, 2017 (SCI-Expanded)

### V. A NUMERICAL INVESTIGATION OF SO<sub>2</sub> EMISSION IN THE STRAIT OF ISTANBUL

Doğrul A., Ozden Y. A., Çelik F.

FRESENIUS ENVIRONMENTAL BULLETIN, vol.25, pp.5795-5803, 2016 (SCI-Expanded)

### VI. A numerical application to predict the resistance and wave pattern of kriso container ship

- Özdemir Y. H., Coşgun T., Doğrul A., Barlas B., Barlas B.  
 Brodogradnja, vol.67, no.2, pp.47-65, 2016 (SCI-Expanded)
- VII. **Performance Analysis and Investigation of the Slipstream Flow of Podded Propellers**  
 Arıkan Y., DOĞRUL A., ÇELİK F.  
 BRODOGRADNJA, vol.63, no.3, pp.226-233, 2012 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Hydrodynamic Investigation of a Submarine Moving Under Free Surface**  
 DOĞRUL A.  
 Journal of ETA Maritime Science, vol.7, pp.212-227, 2019 (ESCI)
- II. **AN EMPIRICAL APPROACH FOR PROPELLER TIP VORTEX CAVITATION NOISE**  
 SEZEN S., DOĞRUL A., BAL Ş.  
 SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, vol.36, no.4, pp.1125-1137, 2018 (ESCI)
- III. **Tip Vortex Index (TVI) Technique for Inboard Propeller Noise Estimation**  
 SEZEN S., DOĞRUL A., BAL Ş.  
 GMO JOURNAL OF SHIP AND MARINE TECHNOLOGY, pp.27-37, 2017 (Peer-Reviewed Journal)
- IV. **A NUMERICAL INVESTIGATION OF THE FLOW IN WATER JET NOZULES**  
 Bilir A. Ç., Doğrul A., Coşgun T., Yurtseven A., Vardar N.  
 JOURNAL OF THERMAL ENGINEERING, vol.2, no.5, pp.907-912, 2016 (ESCI)
- V. **Effects of 2D Source Singularity Moving with Constant Speed on Free Surface**  
 DOĞRUL A., BAL Ş., ÇELİK F.  
 SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, vol.6, pp.149-158, 2015 (Peer-Reviewed Journal)
- VI. **INVESTIGATION OF FREE SURFACE EFFECTS OF A 2-D SOURCE MOVING WITH CONSTANT VELOCITY**  
 Dogrul A., Bal Ş., ÇELİK F.  
 SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, vol.6, no.1, pp.149-156, 2015 (ESCI)
- VII. **A Numerical Investigation of Multiphase Flow and Oil Spill in Istanbul Strait**  
 Doğrul A., Arıkan Özden Y., Çelik F.  
 The Online Journal of Science and Technology, vol.1, no.2, pp.8-15, 2011 (Peer-Reviewed Journal)
- VIII. **Podlu Sevk Sistemlerinin Çevreye Olan Etkilerinin Sayısal Olarak İncelenmesi**  
 Arıkan Özden Y., Doğrul A., Çelik F.  
 Gemi ve Deniz Teknolojisi, no.186, pp.4-12, 2010 (Peer-Reviewed Journal)
- IX. **Gemi Sevk Sistemleri Tarihine Bakış**  
 ARIKAN ÖZDEN Y., DOĞRUL A., ÇELİK F.  
 Gemi ve Deniz Teknolojisi, no.186, pp.13-19, 2010 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Wave Interference Prediction of a Trimaran Using Form Factor**  
 DUMAN S., Dogrul A., YILDIZ B., Datla R.  
 12th International Symposium on High Speed Marine Vehicles (HSMV), ELECTR NETWORK, 15 - 16 October 2020, vol.5, pp.99-108
- II. **ON THE VERIFICATION AND VALIDATION OF FLOW AROUND SUPERSTRUCTURE OF A SURFACE COMBATANT**  
 ÖKSÜZ S., DOĞRUL A.  
 4th INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, 17 - 19 December 2019

- III. NUMERICAL INVESTIGATION OF CANAL EFFECT ON SHIP RESISTANCE IN MODEL SCALE**  
DOĞRUL A., ÇOŞGUN T.  
4th INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, 19 - 21 December 2018
- IV. Computational Investigation of Hydro-Acoustic Performance of DARPA Suboff**  
SEZEN S., DELEN C., DOĞRUL A., BAL Ş.  
International Symposium on Naval Architecture and Maritime (INT-NAM 2018), 24 - 25 April 2018, pp.845-855
- V. Uncertainty Assessment and Self-Propulsion Estimation of Duisburg Test Case**  
DOĞRUL A., ÖZDEMİR Y. H., SEZEN S., BARLAS B.  
INTNAM 2018, 24 - 25 April 2018
- VI. Hydro-Acoustic Performance Prediction of DTMB 4119 Propeller**  
SEZEN S., DELEN C., DOĞRUL A., BAL Ş.  
International Symposium on Naval Architecture and Maritime (INT-NAM 2018), 24 - 25 April 2018, pp.857-869
- VII. Self-Propulsion Simulation of DARPA Suboff**  
DOĞRUL A., SEZEN S., DELEN C., BAL Ş.  
IMAM 2017, Lisbon, Portugal, 9 - 11 October 2017, vol.1, pp.503-511
- VIII. Tip vortex index TVI technique for inboard propeller noise estimation**  
SEZEN S., DOĞRUL A., BAL Ş.  
1st International Congress on Ship and Marine Technology (GMO-SHIPMAR 2016), 8 - 09 December 2016
- IX. On The Uncertainty Analysis of DTMB5415 for Form Factor Prediction**  
DUMAN S., DOĞRUL A., KAHRAMANOĞLU E.  
The Second International Global Maritime Conference (GMC 2016), 24 - 25 October 2016, pp.169-179
- X. Investigation of Marine Propeller Noise for Steady and Transient Flow**  
SEZEN S., DOĞRUL A., BAL Ş.  
The Second International Global Maritime Conference (GMC 2016), 24 - 25 October 2016, pp.149-159
- XI. On The Uncertainty Analysis of DTMB5405 for Form Factor Prediction**  
DUMAN S., DOĞRUL A., KAHRAMANOĞLU E.  
II. Global International Conference on Innovation in Marine Technology and the Future of Maritime Transportation, 24 - 25 October 2016
- XII. Performance prediction of wings moving above free surface**  
DOĞRUL A., Bal Ş.  
International Conference on Boundary Element and Meshless Techniques, BETEQ 2016, 11 - 13 July 2016
- XIII. On the form factor prediction of a displacement type vessel JBC case**  
Topal İ. H., Doğrul A., Coşgun T., Vardar N., VARDAR N.  
International Conference on Advances in Mechanical Engineering (ICAME 2016), 10 - 13 May 2016
- XIV. A RANS Based Numerical Study of Turbulent Flows in Rotating Annular Channels**  
Çoşgun T., Yurtseven A., Doğrul A., Vardar N.  
International Conference on Advances in Mechanical Engineering, İstanbul, Turkey, 13 - 15 May 2015, pp.1-4
- XV. A NUMERICAL INVESTIGATION OF THE FLOW IN WATER JET NOZZLES**  
AHMET ÇAĞRI B., DOĞRUL A., ÇOŞGUN T., YURTSEVEN A., VARDAR N.  
INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, 13 - 15 May 2015
- XVI. Numerical Investigation of Wake Field Effects on Propeller Performance for Different Ships**  
EKİNCİ S., ÇELİK F., DOĞRUL A.  
Second International Symposium on Naval Architecture and Maritime, 23 - 24 October 2014
- XVII. Investigation of the Effects of Gurney Flap on the Lift of NACA 0012 Airfoil in Varying Lengths,**  
Doğrul A., Çakıcı F., Kinaci Ö. K., Bayraktar S.  
19th International Conference on Hydromechanics in Ship Design (HYDROMAN 2012), 19 th-21th September, 2012, Ilawa, POLAND, Gdansk, Poland, 19 - 21 September 2012, vol.1, no.1, pp.1-10
- XVIII. Investigation of The Effects of Different Keel Geometries on A Sailing Yacht**  
Çakıcı F., Usta O., Doğrul A., Bayraktar S.  
19th International Conference on Hydromechanics in Ship Design (HYDRONAV 2012), 19 th-21th September, 2012, Ilawa, POLAND, 2012., Gdansk, Poland, 19 - 21 September 2012, vol.1, no.1, pp.1-9

- XIX. **Prediction of Cavitation on Two and Three Dimensional Hydrofoils by An Iterative BEM**  
ARIKAN ÖZDEN Y., ÇELİK F., DOĞRUL A., BAL Ş.  
8th International Symposium on Cavitation, 13 - 16 August 2012, pp.1
- XX. **Investigation Of Optimum Duct Geometry For A Passenger Ferry**  
ÇELİK F., DOĞRUL A., ARIKAN ÖZDEN Y.  
9th High Speed Marine Vessels Symposium, 26 - 27 May 2011, pp.1
- XXI. **Energy Efficient Hull Form Design For A Pleasure Boat Powered By A Solar Hydrogen Energy System**  
ÇELİK F., DOĞRUL A., ARIKAN ÖZDEN Y.  
9th High Speed Marine Vessels Symposium, 26 - 27 May 2011, pp.1
- XXII. **A Numerical Investigation of Multiphase Flow and Oil Spill in Istanbul Strait**  
DOĞRUL A., ARIKAN ÖZDEN Y., ÇELİK F.  
International Science and Technology Conference 2010, 27 - 29 October 2010, pp.1
- XXIII. **A Numerical Investigation of Air Lubrication Effect on Ship Resistance**  
DOĞRUL A., ARIKAN ÖZDEN Y., ÇELİK F.  
INTERNATIONAL CONFERENCE ON SHIP DRAG REDUCTION (SMOOTH-Ships), 20 - 21 May 2010, pp.1
- XXIV. **Modeling of a HVAC Unit in a Room for Performance Analysis**  
Doğrul A., Özdemir Y. H., Bayraktar S.  
10th Rehva World Congress on Sustainable Energy Use in Buildings (CLIMA 2010), 09-12 May 2010, Antalya, TURKEY, Antalya, Turkey, 9 - 12 May 2010, vol.1, no.1, pp.1-7
- XXV. **CFD Study of Turbulent Flows in Rotating Annular Channels**  
ÇOSGUN T., yurtseven a., doğrul a., çakıcı f., vardar n.  
ICAME 2015 : 17th International Conference on Automotive and Mechanical Engineering

## Supported Projects

Çakıcı F., Yılmaz H., Duman S., Doğrul A., Yıldız B., Kahramanoğlu E., Avcı A. G., Demir Ö., Technopark, 92 metre Korvet İçin Gürültü, Hidrodinamik, Yapısal ve Şok Analizler projesinde danışmanlık hizmeti vermek üzere, 2019 - 2019

Çakıcı F., Yılmaz H., Duman S., Doğrul A., Yıldız B., Avcı A. G., Project Supported by Other Private Institutions, 92 metre Korvet İçin Hidrodinamik Analizler projesinde danışmanlık hizmeti vermek üzere, 2019 - 2019

Doğrul A., Bal Ş., Sezen S., Project Supported by Other Private Institutions, AMDEB Gemisi Hidrodinamik Analizler ve Pervane Tasarımı, 2018 - 2018

DOĞRUL A., Project Supported by Higher Education Institutions, Akiş kaynaklı titreşim ile çalışan yenilenebilir bir enerji türünün Türk sularına uygunluğunun araştırılması, 2015 - 2018

Güner M., Coşgun T., Kinaci Ö. K., Doğrul A., Project Supported by Higher Education Institutions, Zemin etkisiyle çalışan yüksek hızlı bir prototip bir teknenin WIG dizaynı, 2013 - 2017

Çakıcı F., Yılmaz H., Doğrul A., Yıldız B., Project Supported by Other Private Institutions, Lojistik Destek Gemisi (LDG) Projesi kapsamında, Gemi Formu ve Takıntıları için Hidrodinamikler Analizler, 2015 - 2015

Doğrul A., Güner M., Project Supported by Higher Education Institutions, Tandem hidrofoil etkileşimlerinin incelenmesi için parametrik bir çalışma, 2012 - 2015

Çelik F., Arikан Özden Y., Doğrul A., Project Supported by Higher Education Institutions, İki ve Üç Boyutlu Hidrofoiller Üzerinde Tabaka Kavitasyonunun BEM'e dayalı İteratif bir Yöntem ile Tahmini, 2012 - 2014

Doğrul A., Yılmaz H., Project Supported by Other Private Institutions, DENİZALTI KURTARMA ANA GEMİSİ(MOSHIP)VEKURTARMA VE YEDEKLEME GEMİLERİ (KURYED)PROJELERİ, 2012 - 2012

Doğrul A., Yılmaz H., Project Supported by Other Private Institutions, Bir Sualtı Aracı İçin Hidrodinamik Optimizasyon "İsimli Projesinde,Optimum Pervane Tasarımı Ar-Ge İşi, 2011 - 2012

## Memberships / Tasks in Scientific Organizations

MRINA, Member, 2016 - Continues

## **Scientific Refereeing**

JOURNAL OF MARINE SCIENCE AND APPLICATION, Journal Indexed in ESCI, September 2020  
ENVIRONMENTAL MONITORING AND ASSESSMENT, Journal Indexed in SCI-E, August 2020  
Technopark, Yildiz Technical University, Turkey, May 2020  
Technopark, Yildiz Technical University, Turkey, April 2020  
APPLIED OCEAN RESEARCH, SCI Journal, March 2020  
OCEAN ENGINEERING, SCI Journal, March 2020  
Journal of Engineering and Technological Sciences, Journal Indexed in ESCI, February 2020  
Technopark, Yildiz Technical University, Turkey, February 2020  
OCEAN ENGINEERING, SCI Journal, October 2019  
Technopark, Yildiz Technical University, Turkey, September 2019  
OCEAN ENGINEERING, National Scientific Refreed Journal, August 2019  
International Journal of Acoustics and Vibration, SCI Journal, January 2019  
Journal of Marine Engineering and Technology, SCI Journal, January 2019  
GMO Journal of Ship and Marine Technology, Other journals, January 2019  
Ocean Engineering, SCI Journal, December 2018  
Brodogradnja, SCI Journal, September 2018  
Journal of Marine Engineering and Technology, SCI Journal, June 2018  
Ocean Engineering, SCI Journal, June 2018  
Journal of Marine Engineering and Technology, SCI Journal, May 2018  
Journal of Marine Science and Application, Other Indexed Journal, April 2018  
Journal of ETA Maritime Science, Other Indexed Journal, March 2018  
Journal of Marine Engineering and Technology, SCI Journal, February 2018  
Journal of ETA Maritime Science, Other Indexed Journal, June 2017  
GMO Journal of Ship and Marine Technology, Other journals, August 2016  
Journal of Thermal Engineering, Other Indexed Journal, September 2015

## **Mobility Activity**

Research Scholarship Program, Guest Researcher, Universita degli studi di Napoli Frederico II, Italy, 2012 - 2013

## **Metrics**

Publication: 43  
Citation (WoS): 62  
Citation (Scopus): 67  
H-Index (WoS): 5  
H-Index (Scopus): 4

## **Scholarships**

YURTİÇİ DOKTORA PROGRAMI, TUBITAK, 2011 - 2015  
YURTDIŞI DOKTORA ARAŞTIRMA PROGRAMI, YOK, 2012 - 2013

## **Awards**

DOĞRUL A., WAKEHAM PRIZE, RINA, April 2018

## **Non Academic Experience**

Business Establishment Private, Dearsan Tersanesi, Yeni Tip Karakol Botu Projesi