

## Prof. Bahadır Uğurlu

### Personal Information

**Office Phone:** [+90 212 285 6495](tel:+902122856495)

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

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

### International Researcher IDs

ScholarID: gMP8174AAAAJ

ORCID: 0000-0001-7923-6777

Publons / Web Of Science ResearcherID: A-5239-2015

ScopusID: 6602513893

Yoksis Researcher ID: 151518

### Education Information

Doctorate, İstanbul Technical University, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, Turkey 1998 - 2006

Postgraduate, İstanbul Technical University, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, Turkey 1994 - 1999

Undergraduate, İstanbul Technical University, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, Turkey 1988 - 1994

### Foreign Languages

English

### Dissertations

Doctorate, Kısmen akışkanla dolu ve daldırılmış, yüksek frekanslı yapıların hidroelastik analizi, İstanbul Teknik Üniversitesi, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, 2006

Postgraduate, İnce çeperli çubukların eğilme ve burulması, İstanbul Teknik Üniversitesi, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, 1998

### Research Areas

Acoustics and Noise Control, Mechanical Vibrations, Naval Architecture and Marine Engineering

### Academic Titles / Tasks

Research Assistant, İstanbul Technical University, Gemi İnşaatı ve Deniz Bilimleri, Gemi İnşaatı Ve Gemi Makinaları Mühendisliği, 1998 - 2009

## **Academic and Administrative Experience**

İstanbul Teknik Üniversitesi, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, 2013 - Continues

İstanbul Teknik Üniversitesi, Gemi İnşaatı Ve Deniz Bilimleri Fakültesi, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği Bölümü, 2013 - 2015

## **Courses**

Yapısal Analiz için Sayısal Yöntemler , Postgraduate, 2017 - 2018

Yüzen Yapıların Titreşimi , Doctorate, 2017 - 2018

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

- I. **Vibroacoustic analysis of a submarine-propeller system under self-propulsion condition from the perspective of approximate configurations**  
Kahraman İ., Bilici G., Azrak R. T., Tunca E., Kutlu A., Uğurlu B.  
Ocean Engineering, vol.285, 2023 (SCI-Expanded)
- II. **Eliminating the irregular frequencies in wave-body interaction: An investigation for accuracy assessment with higher-order elements**  
Kahraman İ., Tunca E., Uğurlu B.  
Journal of Fluids and Structures, vol.116, 2023 (SCI-Expanded)
- III. **Investigation of acoustic radiation from a sphere vibrating on the free surface of a finite depth water using a boundary element method**  
Üstündağ B., Uğurlu B., Ergin A.  
Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2023 (SCI-Expanded)
- IV. **Acoustic radiation from a sphere pulsating near an impedance plane using a boundary integral equation method**  
Ustundag B., Yıldızdağ M. E., Uğurlu B., Ergin A.  
MATHEMATICS AND MECHANICS OF SOLIDS, vol.27, no.10, pp.1913-1929, 2022 (SCI-Expanded)
- V. **A numerical method for the dynamic stability analysis of supported plates in open and confined axial flow**  
Uğurlu B., Tunca E., Kahraman İ.  
OCEAN ENGINEERING, vol.258, 2022 (SCI-Expanded)
- VI. **Numerical investigation of the Fourier-Kochin theory for wave-induced response estimation of floating structures**  
Uğurlu B., Kahraman İ., Guedes Soares C.  
Ocean Engineering, vol.247, 2022 (SCI-Expanded)
- VII. **Application of the Fourier-Kochin theory for the diffraction and radiation of free-surface waves about stationary floating bodies**  
Ugurlu B., Soares C. G.  
OCEAN ENGINEERING, vol.227, 2021 (SCI-Expanded)
- VIII. **A combined boundary-finite element procedure for dynamic analysis of plates with fluid and foundation interaction considering free surface effect**  
Kutlu A., Uğurlu B., Omurtag M. H.  
OCEAN ENGINEERING, vol.145, pp.34-43, 2017 (SCI-Expanded)
- IX. **Boundary element method based vibration analysis of elastic bottom plates of fluid storage tanks resting on Pasternak foundation**  
Uğurlu B.  
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, vol.62, pp.163-176, 2016 (SCI-Expanded)
- X. **A dual reciprocity boundary element solution method for the free vibration analysis of fluid-coupled**

- Kirchhoff plates**  
 Ugurlu B.  
 JOURNAL OF SOUND AND VIBRATION, vol.340, pp.190-210, 2015 (SCI-Expanded)
- XI. **Dynamic response of Mindlin plates resting on arbitrarily orthotropic Pasternak foundation and partially in contact with fluid**  
 Kutlu A., Ugurlu B., Omurtag M. H., Ergin A.  
 OCEAN ENGINEERING, vol.42, pp.112-125, 2012 (SCI-Expanded)
- XII. **The dynamics and stability of circular cylindrical shells containing and submerged in flowing fluid using a higher order boundary element method**  
 Uğurlu B., Ergin A.  
 PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART M-JOURNAL OF ENGINEERING FOR THE MARITIME ENVIRONMENT, vol.223, pp.489-502, 2009 (SCI-Expanded)
- XIII. **A hydroelastic investigation of circular cylindrical shells-containing flowing fluid with different end conditions**  
 Uğurlu B., Ergin A.  
 JOURNAL OF SOUND AND VIBRATION, vol.318, pp.1291-1312, 2008 (SCI-Expanded)
- XIV. **Dynamics of a rectangular plate resting on an elastic foundation and partially in contact with a quiescent fluid**  
 Uğurlu B., Kutlu A., Ergin A., Omurtag M. H.  
 JOURNAL OF SOUND AND VIBRATION, vol.317, pp.308-328, 2008 (SCI-Expanded)
- XV. **A hydroelasticity method for vibrating structures containing and/or submerged in flowing fluid**  
 Ugurlu B., Ergin A.  
 JOURNAL OF SOUND AND VIBRATION, vol.290, pp.572-596, 2006 (SCI-Expanded)
- XVI. **Hydroelastic analysis of fluid storage tanks by using a boundary integral equation method**  
 Ergin A., UGURLU B.  
 JOURNAL OF SOUND AND VIBRATION, vol.275, pp.489-513, 2004 (SCI-Expanded)
- XVII. **Linear vibration analysis of cantilever plates partially submerged in fluid**  
 Ergin A., UGURLU B.  
 JOURNAL OF FLUIDS AND STRUCTURES, vol.17, no.7, pp.927-939, 2003 (SCI-Expanded)

### Articles Published in Other Journals

- I. **SUPPRESSING THE IRREGULAR FREQUENCIES IN WAVE-BODY INTERACTION PROBLEMS: EFFECT OF DISCRETIZATION ON THE PERFORMANCE OF EXTENDED BOUNDARY INTEGRAL EQUATION METHOD**  
 Tunca E., Duranay A., Ugurlu B.  
 SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, vol.9, no.2, pp.175-192, 2018 (ESCI)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Investigation of acoustic radiation from a sphere pulsating on the free surface using a boundary element approach**  
 Üstündağ B., UĞURLU B., ERGİN A.  
 The 19th International Congress of the International Maritime Association of the Mediterranean, İstanbul, Turkey, 26 - 29 September 2022
- II. **Vibroacoustic noise estimation of a combined elastic submarine-propeller system subjected to the self-propulsion conditions**  
 KAHRAMAN İ., BİLİMİ G., TUNCA E., AZRAK R. T., KUTLU A., UĞURLU B.  
 The 19th International Congress of the International Maritime Association of the Mediterranean, İstanbul, Turkey,

26 September - 29 October 2022

- III. **An isogeometric approach for the dynamic stability of flow induced plates**  
TUNCA E., UĞURLU B.  
The 34th Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures, İstanbul, Turkey, 06 December 2021
- IV. **Structure-borne noise prediction of a submarine structure subjected to propeller excitation**  
AZRAK R. T., KAHRAMAN İ., BİLİZİ G., UĞURLU B.  
The 34th Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures, İstanbul, Turkey, 06 December 2021
- V. **A study on investigation of noise radiation from vibrating structures submerged at finite distance from sea floor**  
UĞURLU B., ERGİN A., Üstündağ B.  
The 34th Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures, İstanbul, Turkey, 06 December 2021
- VI. **Committee I.2: Loads**  
Ogawa Y., Bai W., De Hauteclercque G., Dhavalikar S., Fang C., Fonseca N., Hänninen S., Johannessen T. B., Van Lien M., Morooka C., et al.  
20th International Ship and Offshore Structures Congress, ISSC 2018, Amsterdam, Netherlands, 9 - 14 September 2018, vol.4, pp.13-29
- VII. **Düzensiz Frekans Etkilerinin Kaldırılmasında Eleman Mertebesinin Etkisi**  
DURANAY A., UĞURLU B.  
20. Ulusal Mekanik Kongresi, Bursa, Turkey, 5 - 09 September 2017
- VIII. **Büyük Ölçekli Yüzer Yapıların (BYY) Hidroelastik Analizi**  
TUNCA E., UĞURLU B.  
20. Ulusal Mekanik Kongresi, Bursa, Turkey, 5 - 09 September 2017
- IX. **Ortotrop zemine oturan süper eliptik kesitli akışkan tankı ince taban plaqının serbest titreşim analizi**  
KUTLU A., UĞURLU B., OMURTAG M. H.  
20. Ulusal Mekanik Kongresi, Turkey, 5 - 09 September 2017
- X. **Dynamic stability analysis of flow induced plates by applying a FEM BEM scheme**  
ÇAKIR V., BİLİZİ G., UĞURLU B.  
TEAM2016, 10 - 13 October 2016
- XI. **Free surface coupled hydroelastic analysis of fluid containers**  
TUNCA E., KAHRAMAN İ., UĞURLU B.  
TEAM2016, Mokpo, South Korea, 10 - 13 October 2016
- XII. **Vibration analysis of elastic thin bottom plates of rigid fluid storage tanks resting on Pasternak foundation**  
KUTLU A., UĞURLU B., OMURTAG M. H.  
12th International Conference on Advances in Civil Engineering, İstanbul, Turkey, 21 - 23 September 2016
- XIII. **Ultimate strength analysis for the assessment of stiffener-plate design configuration**  
Tunca E., Uğurlu B.  
The 29th Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures, Vladivostok, Russia, 12 - 15 October 2015, pp.293-299
- XIV. **Zemin ve akışkan ile etkileşen plakların serbest titreşim problemi için bir sınır eleman-karışık sonlu eleman çözümü**  
Kutlu A., Uğurlu B., Omurtag M. H.  
XIX. Ulusal Mekanik Kongresi, Trabzon, Turkey, 24 - 28 August 2015, pp.669-678
- XV. **10th International Congress on Advances in Civil Engineering**  
KUTLU A., UĞURLU B., ERGİN A., OMURTAG M. H.  
11th International Congress on Advances in Civil Engineering, İstanbul, Turkey, 21 - 25 October 2014
- XVI. **Natural frequencies of elliptical fluid storage tanks supported by elastic foundation**  
KUTLU A., UĞURLU B., OMURTAG M. H., ERGİN A.

- XVII. **Pasternak Zeminine Yaslanan ve Kısmen Açısan ile Temas Eden Mindlin Plağının Dinamik Analizi,**  
Kutlu A., Uğurlu B., Omurtag M. H., Ergin A.  
XVIII. Ulusal Mekanik Kongresi, Manisa, Turkey, 26 - 30 August 2013, pp.433-442
- XVIII. **Pasternak zeminine yaslanan ve kısmen aşısan ile temas eden Mindlin plağının dinamik davranışları**  
KUTLU A., UĞURLU B., OMURTAG M. H., ERGİN A.  
XVIII. Ulusal Mekanik Kongresi, Manisa, Turkey, 26 - 30 August 2013, pp.433-442
- XIX. **An hydroelastic investigation into the dynamic response characteristics of bulk carriers**  
KAYDIHAN L., UĞURLU B., ERGİN A.  
3rd International Conference on Marine Structures, MARSTRUCT 2011, Hamburg, Germany, 28 - 30 March 2011
- XX. **Using higher order boundary elements in hydroelasticity analysis of surface piercing structures**  
UĞURLU B., ERGİN A.  
5th International Conference on Hydroelasticity in Marine Technology, Southampton, United Kingdom, 8 - 10 September 2009
- XXI. **Application of the Fourier Kochin theory to the hydroelastic analysis of stationary floating structures**  
UĞURLU B., CARLOS G. S.  
TEAM2008, 22th Asian Technical Exchange and Advisory Meeting on Marine Structures, İstanbul, Turkey, 6 - 09 October 2008
- XXII. **Hydroelastic analysis of a 1900 TEU container ship using finite element and boundary element methods**  
ERGİN A., KAYDIHAN L., UĞURLU B.  
TEAM2007, 21th Asian Technical Exchange and Advisory Meeting on Marine Structures, Yokohama, Japan, 10 - 13 September 2007
- XXIII. **A boundary element method for dynamic analysis of elastic structures subjected to axial flow**  
Uğurlu B., Ergin A.  
25th International Conference on Offshore Mechanics and Arctic Engineering (OMAE 2006), Hamburg, Germany, 4 - 09 June 2006, pp.237-244
- XXIV. **Gemi titreşim problemleri için bir hidroelastik yaklaşım**  
ERGİN A., UĞURLU B.  
Türk Loydu'nun 40. Kuruluş Yıldönümü Sebebiyle Düzenlenen Gemi İnşaatı ve Deniz Teknolojisi Teknik Kongresi, İstanbul, Turkey, 17 December 2002, pp.32-43
- XXV. **A boundary integral method for evaluating the generalized fluid structure interaction forces in elastic vibrations**  
ERGİN A., UĞURLU B.  
ESDA2002, 6th Biennial Conference on Engineering Systems Design and Analysis, İstanbul, Turkey, 8 - 11 July 2002

## Supported Projects

Uğurlu B., Tunca E., Project Supported by Higher Education Institutions, An Isogeometric Approach to Nonlinear Hydroelastic Analysis of Floating Structures, 2021 - Continues

Uğurlu B., Bilici G., Tunca E., Kutlu A., Kahraman İ., TUBITAK Project, Sualtı Araçlarının Gürültü Kestirimi İçin Çok-Bileşenli Sayısal Bir Çözüm Modelinin Geliştirilmesi Ve Uygulanması, 2021 - 2023

Uğurlu B., Tunca E., Kahraman İ., Bilici G., Project Supported by Higher Education Institutions, Operasyonel Şartlar Altındaki Denizaltı Yapılarında ÇokBileşenli Akustik Yayılım Problemi için Sayısal bir Çözüm Modelinin Geliştirilmesi ve Uygulanması, 2021 - 2022

Uğurlu B., Project Supported by Higher Education Institutions, Düzenli dalgalarda sabit hızla ilerleyen ya da yüzen yapıların frekans bölgesi lineer hidroelastik analizi için sayısal bir çözüm ortamının geliştirilmesi, 2015 - 2021

Uğurlu B., Project Supported by Higher Education Institutions, Design of VLFS type wind farms, 2015 - 2017

## **Metrics**

Publication: 44

Citation (WoS): 257

Citation (Scopus): 366

H-Index (WoS): 7

H-Index (Scopus): 9

## **Non Academic Experience**

Gemsan Tersanesi