

# MUHAMMED EMIN BAŐAK

## ASSOC. PROF.

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Fakültesi Gemi İnşaatı ve Gemi Makineleri Mühendisliği T-Blok

Oda No: T-404 Yıldız-Beşiktaş

### International Researcher IDs

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Publons / Web Of Science ResearcherID: L-2961-2018

ScopusID: 24586738800

Yoksis Researcher ID: 167542



## Learning Knowledge

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Doctorate 2008 - 2014	Istanbul University, Institute Of Graduate Studies In Sciences, Elektrik - Elektronik Mühendisliği, Turkey
Postgraduate 2005 - 2008	Istanbul University, Institute Of Graduate Studies In Sciences, Elektrik - Elektronik Mühendisliği, Turkey
Undergraduate 2000 - 2005	Istanbul University, Mühendislik Fakültesi, Elektronik Mühendisliği (İng), Turkey

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## Dissertations

Doctorate, Tümdevrelerdeki Elektromanyetik İletim Yayınımını Modellenmesi, İstanbul Üniversitesi, Mühendislik Fakültesi, Elektrik & Elektronik Mühendisliği, 2014

Postgraduate, Genetik Algoritma ile MOS Parametrelerinin Belirlenmesi ve Optimizasyonu, İstanbul Üniversitesi, Mühendislik Fakültesi, Elektrik & Elektronik Mühendisliği , 2008

## Academic Titles / Tasks

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Associate Professor 2021 - Continues	Yıldız Technical University, Naval Architecture And Maritime Faculty, Department Of Marine Engineering Operations
Associate Professor 2020 - 2021	Yıldız Technical University, Naval Architecture And Maritime Faculty, Department Of Naval Architecture And Marine Engineering
Assistant Professor 2018 - 2020	Yıldız Technical University, Naval Architecture And Maritime Faculty, Department Of Naval Architecture And Marine Engineering

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Assistant Professor  
2015 - 2018

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

Research Assistant  
2005 - 2015

Istanbul University, Mühendislik Fakültesi, Elektrik & Elektronik Mühendisliği

## Supported Projects

1. Çakır M., Üst Y., Kayadelen H. K., Başak M. E., TUBITAK Project, Optimization Research of Combustion Kinetic Mechanism for Ammonia Fueled Power Systems, 2021 - 2024
2. ÜST Y., BAŞAK M. E., BAŞHAN V., PALACI Y., KARAKURT A. S., ARSLAN F., Project Supported by Higher Education Institutions, Karbondioksitin perovskit katalist kullanılan sCO<sub>2</sub> güç çevrimlerinde metan yanmasına etkilerinin incelenmesi, 2018 - 2021
3. BAŞAK M. E., GÖLÇEK K., ALAN M. E., BAYAR H., GÜZEL B., Project Supported by Higher Education Institutions, Yılan Tipi Dalga Yapıcıya Haiz bir Dalga Tankında Gemi Dövünmesinin Deneysel İncelenmesi, 2017 - 2019
4. BAŞAK M. E., Other International Funding Programs, Enerji Yöneticiliği Eğitimi, 2015 - 2015
5. Yarman B. S., Başak M. E., Project Supported by Higher Education Institutions, Geniş band mikrodalga kuvvetlendiricinin yarı analitik yöntem kullanarak tasarımı, 2013 - 2014
6. Başak M. E., Project Supported by Higher Education Institutions, Tümdevrelerdeki Elektromanyetik İletim Yayınımının Modellenmesi, 2012 - 2014
7. BAŞAK M. E., Tümdevrelerde dinamik akım aktivitesinin modellenmesi, 2012 - 2014
8. Başak M. E., Kuntman A., Universities of Other Countries Supported Project, Electromagnetic modeling of integrated circuit emissions., 2007 - 2008
9. BAŞAK M. E., MOS parametrelerinin Genetik Algoritma ile Belirlenmesi ve Optimizasyonu, 2007 - 2008

## Awards

1. Başak M. E., En iyi öğrenci bildirisi, Eleco'2012, December 2012

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

1. **Electronically tunable grounded inductance simulators and capacitor multipliers realization by using single Current Follower Transconductance Amplifier (CFTA)**  
BAŞAK M. E., ÖZER E.  
ANALOG INTEGRATED CIRCUITS AND SIGNAL PROCESSING, vol.112, no.3, pp.401-415, 2022 (SCI-Expanded)
2. **A four-quadrant analog multiplier using DTMOS for low power applications**  
Özer E., Başak M. E., Kaçar F.  
International Journal Of Electronics, vol.10, pp.1-10, 2022 (SCI-Expanded)
3. **Realizations of lossy and lossless capacitance multiplier using CFOAs**  
Özer E., Başak M. E., Kaçar F.  
Aeu-International Journal Of Electronics And Communications, vol.1, no.1, pp.1-18, 2020 (SCI-Expanded)
4. **DTMOS Based High Bandwidth Four-Quadrant Analog Multiplier**  
Başak M. E., Özer E., Kaçar F., Özenli D.  
Informacije Midem-Journal Of Microelectronics Electronic Components And Materials, vol.50, no.2, pp.137-146, 2020 (SCI-Expanded)
5. **CMOS Implementation of Current Differencing Operational Amplifier and Its Notch Filter Application**

- Başak M. E.  
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.29, no.8, pp.2050132, 2020 (SCI-Expanded)
6. **Akım Geri Beslemeli İşlemsel Kuvvetlendirici Kullanılarak Topraklanmış Endüktans Simülâtör Topolojileri**  
BAŞAK M. E.  
Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.9, no.1, pp.49-54, 2019 (AHCI)
  7. **Realization of DT MOS based CFTA and multiple input single output biquadratic filter application**  
BAŞAK M. E.  
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.106, pp.57-66, 2019 (SCI-Expanded)
  8. **Realization of current-mode fully integrated full-wave rectifier**  
BAŞAK M. E., Kacar F.  
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.82, pp.45-51, 2017 (SCI-Expanded)
  9. **Ultra-Low Voltage VDCC Design by Using DT MOS**  
BAŞAK M. E., Kaçar F.  
ACTA PHYSICA POLONICA A, vol.130, no.1, pp.223-225, 2016 (SCI-Expanded)
  10. **RLC circuit extraction with the differential evolution algorithm for conducted electromagnetic emission model of integrated circuits**  
BAŞAK M. E., Kuntman A.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.24, no.1, pp.196-205, 2016 (SCI-Expanded)
  11. **Prediction Methodology of Electromagnetic Emission for Integrated Circuits**  
BAŞAK M. E., Kuntman A.  
ACTA PHYSICA POLONICA A, vol.128, 2015 (SCI-Expanded)
  12. **A New Fully Integrated High Frequency Full-Wave Rectifier Realization**  
BAŞAK M. E., Kacar F.  
INFORMACIJE MIDEM-JOURNAL OF MICROELECTRONICS ELECTRONIC COMPONENTS AND MATERIALS, vol.45, no.2, pp.101-109, 2015 (SCI-Expanded)
  13. **A NEW MIXED MODE FULL-WAVE RECTIFIER REALIZATION WITH CURRENT DIFFERENCING TRANSCONDUCTANCE AMPLIFIER**  
Kacar F., Basak M. E.  
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.23, 2014 (SCI-Expanded)
  14. **MOSFET Spice parameter extraction by modified genetic algorithm**  
BAŞAK M. E., Kuntman A., Kuntman H.  
INFORMACIJE MIDEM-JOURNAL OF MICROELECTRONICS ELECTRONIC COMPONENTS AND MATERIALS, vol.44, no.2, pp.142-151, 2014 (SCI-Expanded)

### Articles Published in Other Journals

1. **Lossy/Lossless Grounded Inductance Simulators Using Current Feedback Operational Amplifier (CFOA)**  
BAŞAK M. E., Kacar F.  
ELECTRICA, vol.18, no.1, pp.95-99, 2018 (ESCI)
2. **Ultra-low voltage VDBA design by using PMOS DT MOS transistors**  
Başak M. E., Kaçar F.  
ISTANBUL UNIVERSITY-JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING, vol.17, no.2, pp.3463-3466, 2017 (Peer-Reviewed Journal)
3. **MOS Parameter Extraction and Optimizatiin with Genetic Algorithm**  
Başak M. E., Kuntman A., Kuntman H. H.

## Refereed Congress / Symposium Publications in Proceedings

1. **Improving Hydrophobicity, Roughness and Hardness Properties of Specimens of Bronze Marine Propeller by Laser Surface Treatment**  
Çınar İ., Başak M. E.  
6th INTERNATIONAL MARMARA SCIENCES CONGRESS (IMASCON 2021 SPRING), Kocaeli, Turkey, 21 - 22 May 2021, pp.27
2. **INVESTIGATION OF WAVE BASIN DESIGN PARAMETERS AND PRODUCTION OF WAVE-MAKER**  
Gölçek K., GÜZEL B., BAYAR H., BAŞAK M. E.  
5TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, İstanbul, Turkey, 17 - 19 December 2019
3. **LOSSY INDUCTANCE SIMULATOR REALIZATION BY USING CURRENT FOLLOWER TRANSCONDUCTANCE AMPLIFIER (CFTA)**  
BAŞAK M. E.  
4TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, İstanbul, Turkey, 19 December 2018, pp.1868-1888
4. **GROUNDING INDUCTANCE SIMULATOR REALIZATIONS BY USING CURRENT FEEDBACK OPERATIONAL AMPLIFIER AND ITS FILTER APPLICATION**  
BAŞAK M. E., Kaçar F.  
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2017, İstanbul, Turkey, 19 December 2017, pp.1111-2222
5. **MOSFET-C based lossy serial inductance simulator**  
Yeşil A., BAŞAK M. E.  
V. INTERNATIONAL ENERGY TECHNOLOGIES CONFERENCE ENTECH'17, İstanbul, Turkey, 15 December 2017, pp.25-32
6. **EXPERIMENTAL RESULT OF FLOATING MEMRISTOR EMULATOR WITH SUBTHRESHOLD REGION**  
Babacan Y., Yeşil A., BAŞAK M. E., Kaçar F.  
V. INTERNATIONAL ENERGY TECHNOLOGIES CONFERENCE ENTECH'17, İstanbul, Turkey, 15 December 2017, pp.90
7. **REALIZATION OF FULL-WAVE RECTIFIER USING CURRENT FOLLOWER TRANSCONDUCTANCE AMPLIFIER**  
BAŞAK M. E.  
V. INTERNATIONAL ENERGY TECHNOLOGIES CONFERENCE ENTECH'17, İstanbul, Turkey, 15 December 2017, pp.57-64
8. **Ultra-Low Voltage and Ultra-Low Power DTMOS Based VDCC Design**  
BAŞAK M. E., Kaçar F.  
2nd INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING, Antalya, Turkey, 14 September 2015, pp.1000
9. **Tümdevrelerin Elektromanyetik Yayınımı için Yakın Alan Ölçümleri**  
BAŞAK M. E., Kuntman A.  
ELECO 2014, Elektrik Elektronik ve Bilgisayar Mühendisliği Sempozyumu, 01 November 2014
10. **Prediction Methodology of Electromagnetic Emission for Integrated Circuits**  
BAŞAK M. E., KUNTMAN A.  
INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESEN), Antalya, Turkey, 25 - 29 October 2014
11. **Tümdevrelerde Elektromanyetik Uyumluluk için Besleme Uçlarının Empedansının Modellenmesi**  
BAŞAK M. E., Kuntman A.  
URSI (International Union of Radio Science) Türkiye Ulusal Komitesi VII. URSI Türkiye Bilimsel Kongresi, 01 August

2014

12. **Dynamic current activity measurement for integrated circuit emission model**  
BAŞAK M. E., KUNTMAN A.  
ELECO 2013, International Conference on Electrical and Electronics, 28 - 30 November 2013
13. **Tümdevrelerin Elektromanyetik Performansı İçin Pasif Devre Tasarımı**  
BAŞAK M. E., KUNTMAN A.  
ELECO 2012: E Elektrik Elektronik ve Bilgisayar Mühendisliği Sempozyumu, Turkey, 29 November 2012 - 01 January 2013
14. **Tümdevrelerin Elektromanyetik Performansı için Pasif Devre Tasarımı**  
BAŞAK M. E., Kuntman A.  
ELECO 2012, Elektrik Elektronik ve Bilgisayar Mühendisliği Sempozyumu, 01 December 2012
15. **Genetik Algoritma ile MOS Parametrelerinin Belirlenmesi ve Optimizasyonu**  
BAŞAK M. E., Kuntman A., Kuntman H.  
ELECO 2008, 5. Elektrik Elektronik ve Bilgisayar Mühendisliği Sempozyumu (Elektronik-Bilgisayar), 01 November 2008
16. **Extraction of BSIM3V3 Threshold Voltage and Mobility Effect Parameters with Genetic Algorithm**  
BAŞAK M. E., KUNTMAN A., KUNTMAN H. H.  
ELECO 2007: The 5th International Conference on Electrical and Electronics, 5 - 09 December 2007
17. **MOSFET BSIM3V3 Eşik Gerilimi Ve Mobilite Parametrelerinin Genetik Algoritma İle Çıkartılması**  
BAŞAK M. E., KUNTMAN A., KUNTMAN H. H.  
Elektrik-Elektronik-Bilgisayar, Biyomedikal Müh. 12. Ulusal Kongresi, Turkey, 14 - 18 November 2007

## Expert Reports

1. **2014/736**  
BOZKURT Ö. Ö., TAYŞI Z. C., BAŞAK M. E.  
İSTANBUL 15. ASLİYE TİCARET MAHKEMESİ, pp.7, İstanbul, 2017

## Academic and Administrative Experience

2019 - Continues	<b>Birim Kalite Komisyonu Başkanı</b>	Yildiz Technical University, Naval Architecture And Maritime Faculty, Department Of Marine Engineering Operations
2016 - 2021	<b>Bölüm Kalite Komisyonu Başkanı</b>	Yildiz Technical University, Naval Architecture And Maritime Faculty, Department Of Naval Architecture And Marine Engineering
2016 - 2019	<b>Deputy Head of Department</b>	Yildiz Technical University, Naval Architecture and Maritime Faculty, Gemi İnşaatı Ve Gemi Makineleri Mühendisliği
2016 - 2019	<b>Fakülte Kurulu Üyesi</b>	Yildiz Technical University, Naval Architecture and Maritime Faculty, Department of Naval Architecture and Marine Engineering

## Advising Theses

- Başak M. E., Investigation of the effects of laser surface treatment on bronze propellers, Postgraduate, İÇİNAR(Student), 2021
- Başak M. E., Gemi ve açık deniz yapıları testlerine yönelik çoklu pedal kontrollü dalga üretici tasarımı ve üretimi, Postgraduate, K.GÖLÇEK(Student), 2020

## Mobility Activity

Erasmus Programme, Research During Graduate Education, Ecole Supérieure d'Ingénieurs en Génie Electrique, France, 2007 - 2008

## Metrics

Publication: 35

Citation (WoS): 44

Citation (Scopus): 65

H-Index (WoS): 4

H-Index (Scopus): 4

## Congress and Symposium Activities

V. INTERNATIONAL ENERGY TECHNOLOGIES CONFERENCE, Attendee, İstanbul, Turkey, 2017

## Research Areas

Electrical and Electronics Engineering, Electronic, Electronic Circuits, Electromagnetic, Engineering and Technology