

## Assoc. Prof. MURAT TÖREN

### Personal Information

**Office Phone:** [+90 464 223 7518](tel:+904642237518) Extension: 1143

**Fax Phone:** [+90 464 223 7514](tel:+904642237514)

**Email:** [murat.toren@erdogan.edu.tr](mailto:murat.toren@erdogan.edu.tr)

**Web:** <https://www.murattoren.com>

**Address:** Recep Tayyip Erdogan Üniv. Mühendislik Fakültesi, Elektrik Elektronik mühendisliği Merkez /Rize

### International Researcher IDs

ORCID: 0000-0002-7012-7088

Yoksis Researcher ID: 24495

### Biography

He was born in Kayseri in 1983. He completed his primary and secondary education in Kayseri. He joined Nigde University Electrical and Electronics Engineering in 2003 and graduated in 2007. In 2009, the Master of Science in Electrical and Electronics Engineering of Erciyes University was started and completed in 2013. In the same year he started his doctorate education at Ataturk University in Electrical and Electronics Engineering and finished in 2018. He speaks English. He is married and has 2 childs.

### Education Information

Doctorate, Ataturk University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, Turkey 2013 - 2018

Postgraduate, Erciyes University, Mühendislik Fakültesi, Elektrik- Elektronik Mühendisliği , Turkey 2009 - 2013

Undergraduate, Niğde Üniversitesi, Mühendislik-Mimarlık, Elektrik-Elektronik Mühendisliği, Turkey 2003 - 2007

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Education Management and Planning, Akademik Düzeyde Araştırma Projesi Hazırlama Eğitimi, Tübitak, 2015

### Dissertations

Doctorate, DIŞ ORTAMLARDA KULLANILABİLİR KURU TİP TRANSFORMATÖRÜN GRAFEN TEMELLİ ISIL ANALİZİ , Ataturk University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2018

Postgraduate, Çok girişli- çok çıkışlı dikgen frekans bölme çözümleri (MIMO-OFDM) sistemlerinde tepe güç/ortalama güç oranı (PAPR) azaltımı , Erciyes University, Makine ve Metal Teknolojileri Bölümü, Elektrik-Elektronik Mühendisliği, 2013

## Research Areas

Electrical and Electronics Engineering, Energy, Electric Power Transmission, Distribution and Protection, Power Electronics, Power Apparatus (transformers,reactors,switchgear,etc.), Engineering and Technology

## Academic Titles / Tasks

Associate Professor, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ, 2024 - Continues

Assistant Professor, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ, 2018 - 2024

Lecturer, Recep Tayyip Erdogan University, Teknik Bilimler Meslek Yüksekokulu, Elektronik ve Otomasyon Bölümü, 2009 - 2018

## Academic and Administrative Experience

Fakülte Kurulu Üyesi, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ, 2023 - Continues

Fakülte Yönetim Kurulu Üyesi, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ, 2020 - 2024

Head of Department, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2019 - 2022

Head of Department, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ, 2018 - 2019

Recep Tayyip Erdogan University, Teknik Bilimler Myo, Elektronik Ve Otomasyon, 2012 - 2015

## Courses

ELEKTRİK MAKİNALARI-II, Undergraduate, 2019 - 2020

DEVRE ANALİZİ-II, Undergraduate, 2019 - 2020

DEVRE ANALİZİ-I, Undergraduate, 2019 - 2020

Güç Sistemleri Analizine Giriş, Undergraduate, 2017 - 2018

Elektrik Makineleri -I, Undergraduate, 2017 - 2018

Alternatif Akım Devreleri, Associate Degree, 2009 - 2010

Güç Elektroniği, Associate Degree, 2009 - 2010

Bilgisayar Destekli Çizim, Associate Degree, 2009 - 2010

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

- I. **Determination of the Performance Parameters of a Gearless Direct-Drive Inner-Rotor PMSM Motor via Different Slot-Magnet Combinations**  
Tören M.  
IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY - TRANSACTIONS OF CIVIL ENGINEERING, vol.48, no.1, pp.127-142, 2024 (SCI-Expanded)
- II. **Comparative Implementation of Thermoelectric Coolers in Transformer Cooling**  
Tören M., Mollahasanoglu H.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, 2023 (SCI-Expanded)
- III. **Optimization of transformer parameters at distribution and power levels with hybrid Grey wolf-whale optimization algorithm**  
Tören M.

- ENGINEERING SCIENCE AND TECHNOLOGY, AN INTERNATIONAL JOURNAL, no.43, pp.1-14, 2023 (SCI-Expanded)
- IV. **Investigation of the effect of different power degree NdFeB magnets used in interior permanent magnet brushless direct current motor (IPMBLDC) on motor performance Gömülü kalici miknatıslı-fırçasız doğru akım motorda (IPMBLDC) kullanılan farklı güç dereceli NdFeB miknatısların motor performansına etkisinin incelenmesi**  
Tören M., Mollahasanoğlu H.  
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.38, no.3, pp.1389-1401, 2023 (SCI-Expanded)
  - V. **Comparison of Heuristic Approaches in Weight Optimization of Different Power Levels Transformers**  
Tören M., Mollahasanoğlu H.  
IETE JOURNAL OF RESEARCH, vol.69, no.5, pp.2266-2280, 2023 (SCI-Expanded)
  - VI. **Comparative analysis of the magnet effects on the permanent magnet BLDC motor performance used in electric vehicles**  
TÖREN M.  
ELECTRICAL ENGINEERING, vol.104, no.5, pp.3411-3423, 2022 (SCI-Expanded)
  - VII. **Comparative implementation of graphene sheet insulation heat effect in dry-type transformers**  
TÖREN M., Celebi M.  
THERMAL SCIENCE AND ENGINEERING PROGRESS, vol.26, 2021 (SCI-Expanded)
  - VIII. **Efficiency Improvement for a DC-DC Quadratic Power Boost Converter by Applying a Switch Turn-off Lossless Snubber Structure Based on Zero Voltage Switching**  
Ghaderi D., Celebi M., MİNAZ M. R., Tören M.  
ELEKTRONIKA IR ELEKTROTEHNIKA, vol.24, no.3, pp.15-22, 2018 (SCI-Expanded)
  - IX. **Peak-to-Average-Power-Ratio (PAPR) Reduction Methods with Wavelet Transform in MIMO-OFDM**  
Tören M., Ciflikli C.  
IETE JOURNAL OF RESEARCH, vol.64, no.3, pp.415-421, 2018 (SCI-Expanded)
  - X. **Heuristic algorithm-based estimation of rotor resistance of an induction machine by slot parameters with experimental verification**  
Celebi M., Tören M.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.25, no.5, pp.3553-3568, 2017 (SCI-Expanded)
  - XI. **Comparison of Reduction Methods for Peak-to-Average-Power-Ratio (PAPR) in MIMO-OFDM Systems with a New Approach**  
Tören M., Ciflikli C.  
ACTA PHYSICA POLONICA A, vol.130, no.1, pp.417-421, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Evaluation of the Exposure of 4.5G Mobile Phone Base Stations in Different Band Radio Frequencies in Urban Center and Rural Areas in Turkey.**  
Tören M., Ulutaşdemir N.  
Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi, vol.13, no.1, pp.66-73, 2024 (Peer-Reviewed Journal)
- II. **Evaluation of the performance of an unmanned aerial vehicle with artificial intelligence support and Mavlink protocol designed for response to social incidents response**  
Tören M., Mollahasanoğlu H., Çepni M., Kına M.  
International Journal of Applied Mathematics Electronics and Computers, vol.11, no.2, pp.88-93, 2023 (Peer-Reviewed Journal)
- III. **Gri Kurt Optimizasyon Algoritması ile Güç ve Dağıtım türü Transformatörlerin Ağırlık Optimizasyonu**  
TÖREN M., MOLLAHASANOĞLU H.  
Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.12, no.1, pp.96-103, 2023 (Peer-Reviewed Journal)

- IV. **Investigation of Electric Motors in Electric and Hybrid Vehicles and Estimation of Changes in CO2 Emissions: A Sample of Turkey**  
Tören M., Mollahasanoglu H.  
El-Cezeri Journal of Science and Engineering, vol.9, no.3, pp.1082-1097, 2022 (Scopus)
- V. **FEM and CFD Analysis of a Hybrid Cooling System Design in Oil-Type Transformers**  
Tören M.  
Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.11, no.3, pp.611-619, 2022 (Peer-Reviewed Journal)
- VI. **ELEKTRİKLİ ARAÇLARIN BATARYA YÖNETİM SİSTEMİNİN SOĞUTMA SİSTEM TASARIMI VE KONTROLÜ**  
TÖREN M., MOLLAHASANOĞLU H., Kaya S. M.  
Journal of Scientific Reports-B, no.5, pp.11-21, 2022 (Peer-Reviewed Journal)
- VII. **Thermoelectric Cooling System in Transformer Performance as an Alternative Cooling System**  
Tören M., Mollahasanoğlu H.  
European Journal of Science and Technology, vol.32, pp.498-507, 2021 (Peer-Reviewed Journal)
- VIII. **EXPERIMENTAL AND SIMULATING OF DRY-TYPE TRANSFORMER THERMAL ANALYSIS WITH A NEW APPROACH FOR OUTDOOR APPLICATIONS**  
TÖREN M., ÇELEBİ M.  
Uludağ University Journal of The Faculty of Engineering, vol.24, no.2, pp.103-114, 2019 (Peer-Reviewed Journal)
- IX. **Kuru Tip Transformatörlerin Dış Ortamlarda Kullanılabilmesi İçin Deneysel Ve Simülasyon İle Termal Analizine Yeni Yaklaşım**  
TÖREN M., ÇELEBİ M.  
Uludağ University Journal of The Faculty of Engineering, vol.24, no.2, pp.103-114, 2019 (Peer-Reviewed Journal)
- X. **A Comparison of The Programmes Using Finite Element Software in Electrical Machine Design**  
TÖREN M., ÇELEBİ M.  
INTERNATIONAL JOURNAL OF APPLIED MATHEMATICS, ELECTRONICS AND COMPUTERS, vol.1, no.4, pp.391-398, 2016 (Peer-Reviewed Journal)
- XI. **Weight Comparison of Oil and Dry Type Distribution Transformers**  
TÖREN M., ÇELEBİ M.  
International Journal of Electrical, Computer, Energetic, Electronic and Communication Engineering, vol.10, no.1, pp.899-904, 2016 (Non Peer-Reviewed Journal)

## **Books & Book Chapters**

- I. **Alternatif Akım Devre Analizi**  
Tören M.  
Nobel Yayın Dağıtım, Ankara, 2022
- II. **INVESTIGATION OF THE EFFECTS OF DIFFERENT TEMPERATURE PERFORMANCE TYPES OF MAGNET ON MOTOR PERFORMANCE PARAMETERS IN PMSM MOTOR FROM ELECTRIC VEHICLE TRACTION MOTORS**  
Tören M., Mollahasanoğlu H., Toran S. E.  
in: CURRENT STUDIES IN ELECTRICAL ELECTRONICS AND COMPUTER ENGINEERING, Prof. Dr. Ismail Saritas, Assoc. Prof. Dr. İlker Ali Ozkan, Editor, Eğitim Yayınevi Tic. Ltd. Şti., İstanbul, pp.119-131, 2022

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

- I. **Detection of Phytophagous Mite Induced Damage in Tea Plant by Image Processing and Deep Learning Techniques**  
Tören M., Akner M. M., Kaba B., Yazıcı F., Asan B., Beriş F. Ş.

8th International Artificial Intelligence and Data Processing Symposium, Malatya, Turkey, 21 - 22 September 2024, pp.1-8

- II. **DEVELOPMENT OF ECG ANALYSIS PROGRAM USING MATLAB INTERFACE FOR HEART RHYTHM DISORDER DETECTION**  
TÖREN M., MOLLAHASANOĞLU H., NASUHBEYOĞLU H.  
VIII. INTERNATIONAL HEALTH, ENGINEERING AND SCIENCES CONGRESS, İzmir, Turkey, 06 April 2024, pp.74-81
- III. **OPTIMIZATION OF BLDC TRACTION MOTOR PARAMETERS IN ELECTRIC VEHICLES WITH WHALE OPTIMIZATION ALGORITHM**  
TÖREN M., MOLLAHASANOĞLU H.  
5th International Conference of Materials and Engineering Technology (TICMET'23), Trabzon, Turkey, 13 - 16 November 2023, pp.9
- IV. **THE EFFECT OF NANOPARTICLE FLUID COOLERS ON THE LIFE AND PERFORMANCE OF DISTRIBUTION TYPE TRANSFORMERS**  
Tören M., Mollahasanoğlu H.  
5th International Conference of Materials and Engineering Technology (TICMET'23), Trabzon, Turkey, 13 - 16 November 2023, pp.10-19
- V. **Investigation of the Effects of Different Temperature Performance Types of Magnet on Motor Performance Parameters in PMSM Gearless Motor from Electric Vehicle Traction Motors**  
Tören M., Mollahasanoğlu H., Toran S. E.  
International Conference on Advanced Technologies(ICAT'22), Van, Turkey, 25 - 27 November 2022, vol.1, no.1, pp.73
- VI. **Unmanned Aerial Vehicle Designed for Response to Social Incidents and Performance Investigation**  
Tören M., Mollahasanoğlu H., Kına M., Çepni M.  
International Conference on Advanced technologies, Van, Turkey, 25 - 27 November 2022, vol.1, no.1, pp.272-276
- VII. **Cooling System Design and Control of Battery Management System of Electric Vehicles**  
Tören M., Mollahasanoğlu H., Kaya S. M.  
3rd International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 20 - 23 July 2022, vol.1, no.1, pp.1024-1025
- VIII. **Determination of Optimum Stator and Rotor Resistance Values for Obtaining Parameters of Three Phase Induction Motor by Taguchi Method**  
TÖREN M., MOLLAHASANOĞLU H.  
13th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 25 November 2021, pp.440-444
- IX. **Optimization of Permanent Magnet Size Used in Brushless DC Motors (BLDC) with Taguchi Method**  
Tören M., Mollahasanoğlu H.  
ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİNDE GÜNCEL GELİŞMELER SEMPOZYUMU, Trabzon, Turkey, 24 - 25 September 2021, vol.1, pp.39-44
- X. **Investigation of Performance Effects of Different Synchronous Generators to be Used in Micro Type Hydro Power Plants**  
Tören M., Mollahasanoğlu H., Koç E.  
I. Elektrik-Elektronik Mühendisliğinde Güncel Gelişmeler Sempozyumu (EEMGG'21), Trabzon, Turkey, 24 - 25 September 2021, vol.1, pp.25-28
- XI. **Investigation of Thermoelectric Cooler System Effect on Induction Motor Performance**  
Tören M., Mollahasanoğlu H.  
2021 17th International Conference on Electrical Machines, Drives and Power systems (ELMA), Sofija, Bulgaria, 1 - 04 July 2021, pp.1-10
- XII. **DETERMINING THE NUMBER OF PEOPLE IN THE BUILDING FOR EARTHQUAKE INFORMATION SYSTEMS BY IMAGE PROCESSING AND ARTIFICIAL INTELLIGENCE**  
Tören M., Sazak Turgut Ç., Kına M., Eskicioğlu B., Arslan Ö.  
5. Uluslararası Erciyes Bilimsel Araştırmalar Kongresi, Kayseri, Turkey, 16 - 18 April 2021, vol.1, no.1, pp.201-211
- XIII. **Investigation Of The Thermoelectric Coolers Effects On Life Cycle Of Transformers**

Tören M., Mollahasanoğlu H., Tağıl M.

12th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 26 - 28 November 2020, pp.221-225

- XIV. **Efficiency Improvement for a DC-DC Quadratic Power Boost Converter by Applying a Switch Turn-off Lossless Snubber Structure Based on Zero Voltage Switching**  
Ghaderi D., ÇELEBİ M., Minaz M. R., TÖREN M.  
22nd International Conference ELECTRONICS 2018, Palanga, Lithuania, 18 - 20 June 2018, vol.1, no.1, pp.1
- XV. **Analysis of the Heat Effect of Winding Types on the Dry Type Transformers**  
TÖREN M., ÇELEBİ M., HAYDARASLAN E.  
8th International Advanced Technologies Symposium, Elazığ, Turkey, 19 November - 22 December 2017, pp.3135-3142
- XVI. **Investigating the Effect of Core Materials in Heat Transfer of Dry Type Transformers**  
TÖREN M., ÇELEBİ M.  
International Advanced Technology Symposium, Elazığ, Turkey, 19 - 22 October 2017, vol.1, no.1, pp.2954-2961
- XVII. **Analysis of The Heat Effect of Different Cooling Type on Transformers**  
TÖREN M., ÇELEBİ M., HAYDARASLAN E., Ghaderi D.  
ICADET'17 (International Conference on Advanced Engineering Technologies), Bayburt, Turkey, 21 - 23 September 2017, vol.1, no.1, pp.1523
- XVIII. **Kuru Tip Transformatörlerde Nüve Materyallerinin Verime Etkisi (Impact on Efficiency of Core Materials in Dry Type Transformers)**  
TÖREN M., ÇELEBİ M.  
ELECO'2016ELEKTRİK – ELEKTRONİK ve BİYOMEDİKAL MÜHENDİSLİĞİ KONFERANSI 01-03 ARALIK 2016, Bursa, Turkey, 1 - 03 December 2016
- XIX. **Dry-Type Transformer Weight Optimization based on Ant Algorithm**  
TÖREN M., ÇELEBİ M.  
International Conference on Computational Experimental Sciences and Engineering, Antalya, Turkey, 19 - 24 October 2016, vol.1, no.1, pp.222
- XX. **A Comparison of the Programmes using Finite Element Software in Electrical Machine Design**  
TÖREN M., ÇELEBİ M.  
3rd International Conference on Advanced Technology & Sciences, Konya, Turkey, 1 - 03 September 2016, vol.3, no.1, pp.771-780
- XXI. **WEIGHT COMPARISON OF OIL TYPE DISTRIBUTION TRANSFORMERS AND DRY TYPE DISTRIBUTION TRANSFORMERS**  
TÖREN M., ÇELEBİ M.  
ICEME 2016 (International Conference on Electrical and Mechanical Engineering), İstanbul, Turkey, 21 - 22 July 2016, vol.10, pp.2279-2284
- XXII. **COMPARISON OF REDUCTION METHODS FOR PEAK-TO-AVERAGE-POWER-RATIO (PAPR) IN MIMO-OFDM SYSTEMS WITH A NEW APPROACH**  
TÖREN M., ÇİFLİKLİ C.  
International Conference on Computational Experimental Sciences and Engineering, Antalya, Turkey, 14 - 18 October 2015, vol.1, no.1, pp.292
- XXIII. **MIMO-OFDM Sistemlerinde Dalgacık Dönüşümü ve PTS Tekniği ile PAPR AzaltmaPAPR Reduction with Wavelet Transform and PTS Tecnique in MIMO-OFDM Systems**  
Tören M., Çiflikli C., Özşahin A. T.  
Eleco'12, Bursa, Turkey, 29 November - 01 December 2012, vol.1, no.1, pp.12-16

## Supported Projects

Tören M., Mollahasanoğlu H., Yelgel Ö. C., TUBITAK Project, Termoelektrik Soğutucuların Yağlı Tip Dağıtım Transformatörlerinin Faydalı Ömürlerine Etkisinin İncelenmesi, 2021 - 2022

TÖREN M., TUBITAK Project, Rize Bilim Şenliği, 2016 - 2016

## **Memberships / Tasks in Scientific Organizations**

Elektrik Mühendisleri Odası, Member, 2007 - Continues

## **Scientific Refereeing**

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, SCI Journal, July 2020

Sürdürülebilir Mühendislik Uygulamaları ve Teknolojik Gelişmeler Degisi, Other Journals, May 2020

COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING, SCI Journal, January 2020

COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING, SCI Journal, May 2019

Electric Power Systems Research, SCI Journal, March 2017

TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, January 2014

## **Metrics**

Publication: 47

Citation (WoS): 37

Citation (Scopus): 48

H-Index (WoS): 4

H-Index (Scopus): 4

## **Non Academic Experience**

Professional Chamber, Recep Tayyip Erdogan University, Elektrik Ve Elektronik Mühendisliği Bölümü

Business Establishment Private, Tören Mühendislik

Business Establishment Private, Elin Mühendislik Ltd.Şti