

Assoc. Prof. TANER GÖKTAŞ

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International Researcher IDs

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Biography

Taner Goktas (S'14-M'16-SM'22) received his B.S and M.S degrees in Electrical Engineering in 2006 and 2010, respectively, and the Ph.D. degree in Electrical Engineering in 2015. He was a visiting scholar in the Power Electronic and Drives Lab, University of Texas at Dallas from 2014 to 2015. Since 2021, he has been a Faculty Member with Dokuz Eylül University, İzmir, TR. His research interests include power electronics and drives, condition monitoring, fault diagnosis and diagnostic techniques and design of electric machines. He has author and co-author of more than 40 articles published in technical journals and conference proceedings. He currently serves as an Associate Editor for *IEEE Transactions on Vehicular Technology*.

Education Information

Doctorate, Inonu University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), Turkey 2010 - 2015

Postgraduate, Firat University, Institute Of Science, Elektrik-Elektronik Mühendisliği, Turkey 2006 - 2010

Undergraduate, Firat University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 2002 - 2006

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Online rotor bar fault detection in induction motor under load oscillation, Inonu University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), 2015

Postgraduate, Development of ac motor drive based on programmable digital signal controller (DSC), Firat University, Institute Of Science, Elektrik-Elektronik Mühendisliği, 2010

Research Areas

Electrical and Electronics Engineering, Energy, Renewable energy, Power Electronics

Academic Titles / Tasks

Associate Professor, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2023 - Continues

Assistant Professor, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2021 - 2023

Assistant Professor, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2016 - 2021

Lecturer, Hitit University, Osmaniye Ömer Derindere Vocational School, Department Of Electronics And Automation, 2010 - 2016

Academic and Administrative Experience

Staj Koordinatörü, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2023 - Continues

Mevlana Exchange Program Institutional Coordinator, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2022 - Continues

Erasmus Program Institutional Coordinator Assistant, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2022 - Continues

Head of Department, Hitit University, Osmaniye Ömer Derindere Vocational School, Technical Programs Department, 2013 - 2015

Head of Department, Hitit University, Osmaniye Ömer Derindere Vocational School, Technical Programs Department, 2011 - 2014

Courses

Energy Conversion-II, Undergraduate, 2022 - 2023, 2021 - 2022

Energy Conversion-I, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022

Research Project, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022

Final Year Project, Undergraduate, 2022 - 2023, 2021 - 2022

Electric Motor Drives, Postgraduate, 2022 - 2023

Elektroteknik ve Elektrik Makinaları, Undergraduate, 2022 - 2023

Asenkron ve Senkron Makineler, Associate Degree, 2021 - 2022

Advising Theses

Göktaş T., Comparative Analysis of Multi-Environment Sensor Data for Reliable Detection of Electrical and Mechanical Faults in Electrical Motors, Postgraduate, G.Nur(Student), Continues

Göktaş T., Sabit Mıknatıslı Senkron Motorlarda Eksantriklik Arızasının Alternatif Akım Sargı Direnci Üzerindeki Etkileri, Doctorate, H.Yetiş(Student), Continues

Göktaş T., Modeling, design and control of DC-DC buck converter, Postgraduate, H.SUCU(Student), 2021

Göktaş T., Eccentricity fault detection in permanent magnet synchronous motors, Postgraduate, M.GÜR(Student), 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Classifying the Percentage of Broken Magnets in Permanent Magnet Synchronous Motors Using Combined Short-Time Fourier Transform and a Pre-Trained Convolutional Neural Network**
Ghafouri Matanagh A., Öztürk S. B., GÖKTAŞ T., Hegazy O.
Energies, vol.17, no.2, 2024 (SCI-Expanded)
- II. **Performance enhancement of single-phase induction motor using GA based multi-objective Optimisation**
Bin Younas M., Khalid H. A., Javed A., Yetis H., GÖKTAŞ T., ARKAN M.
INTERNATIONAL JOURNAL OF ELECTRONICS, vol.109, no.9, pp.1473-1492, 2022 (SCI-Expanded)
- III. **Evaluation and Classification of Double Bar Breakages Through Three-Axes Vibration Sensor in Induction Motors**
GÖKTAŞ T.
IEEE SENSORS JOURNAL, vol.22, no.13, pp.13602-13611, 2022 (SCI-Expanded)
- IV. **Interturn Short-Circuit Faults in Permanent Magnet Synchronous Machines: An Extended Review and Comprehensive Analysis**
Zafarani M., Bostanci E., Qi Y., GÖKTAŞ T., Akin B.
IEEE JOURNAL OF EMERGING AND SELECTED TOPICS IN POWER ELECTRONICS, vol.6, no.4, pp.2173-2191, 2018 (SCI-Expanded)
- V. **Discerning broken rotor bar failure from low-frequency load torque oscillation in DTC induction motor drives**
GÖKTAŞ T., ARKAN M.
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.40, no.1, pp.279-286, 2018 (SCI-Expanded)
- VI. **Comprehensive Analysis of Magnet Defect Fault Monitoring Through Leakage Flux**
GÖKTAŞ T., Zafarani M., Lee K. W., Akin B., Sculley T.
IEEE TRANSACTIONS ON MAGNETICS, vol.53, no.4, 2017 (SCI-Expanded)
- VII. **An Investigation of Motor Topology Impacts on Magnet Defect Fault Signatures**
Zafarani M., GÖKTAŞ T., Akin B., Fedigan S. E.
IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, vol.64, no.1, pp.32-42, 2017 (SCI-Expanded)
- VIII. **Modeling and Dynamic Behavior Analysis of Magnet Defect Signatures in Permanent Magnet Synchronous Motors**
Zafarani M., GÖKTAŞ T., Akin B., Fedigan S. E.
IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, vol.52, no.5, pp.3753-3762, 2016 (SCI-Expanded)
- IX. **Discernment of Broken Magnet and Static Eccentricity Faults in Permanent Magnet Synchronous Motors**
GÖKTAŞ T., Zafarani M., Akin B.
IEEE TRANSACTIONS ON ENERGY CONVERSION, vol.31, no.2, pp.585-594, 2016 (SCI-Expanded)
- X. **A Comprehensive Magnet Defect Fault Analysis of Permanent-Magnet Synchronous Motors**
Zafarani M., GÖKTAŞ T., Akin B.
IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, vol.52, no.2, pp.1331-1339, 2016 (SCI-Expanded)
- XI. **Detection of rotor fault in three-phase induction motor in case of low-frequency load oscillation**
GÖKTAŞ T., ARKAN M., Ozguven O. F.
ELECTRICAL ENGINEERING, vol.97, no.4, pp.337-345, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Asenkron Motorlarda Stator Sarım-Sarım Arası Kısa Devre Arızasının Elektriksel, Mekaniksel ve Manyetiksel Motor Parametrelerine Dinamik Etkileri**
Akbayır K., GÖKTAŞ T., ARKAN M.
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.24, no.72, pp.815-824, 2022 (Peer-Reviewed Journal)

- II. **Design, Simulation and Application of Buck Converter with Digital PI Controller**
SUCU H., GÖKTAŞ T., ARKAN M.
Balkan Journal of Electrical and Computer Engineering, vol.9, no.2, pp.106-113, 2021 (Peer-Reviewed Journal)
- III. **Dişlisiz Asansör Uygulamaları için Yüzey Montajlı Senkron Motorun Optimal Tasarımı**
OKŞAR M., YETİŞ H., GÖKTAŞ T., KAYGUSUZ A., MEŞE E.
Fırat Üniversitesi Mühendislik Bilimleri Dergisi, vol.32, no.2, pp.335-344, 2020 (Peer-Reviewed Journal)
- IV. **Comparative Design of Permanent Magnet Synchronous Motors for Low-Power Industrial Applications**
YETİŞ H., GÖKTAŞ T.
Balkan Journal of Electrical and Computer Engineering, vol.8, no.3, pp.218-224, 2020 (Peer-Reviewed Journal)
- V. **Güç Transformatörlerinin Yıldırım Darbe Analizlerinin ANSYS@Maxwell-3D ile Gerçekleştirilmesi**
ÖZÜPAK Y., MAMIŞ M. S., GÖKTAŞ T., ARKAN M.
Kırklareli Üniversitesi Mühendislik ve Fen Bilimleri Dergisi, vol.5, no.2, pp.147-158, 2019 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Discernment of Static Eccentricity and Electrical Load Unbalance Currents through Space Vector Stray Flux in Permanent Magnet Synchronous Generator based Wind Turbines**
ALADAĞ İ., GÖKTAŞ T., ARKAN M.
IEEE 14th International Conference on Electrical and Electronics Engineering (ELECO) 2023, Bursa, Turkey, 30 November - 02 December 2023
- II. **Reliable Detection of Broken Bar Fault through Negative Sequence of Stray Flux in Induction Motors**
GÖKTAŞ T., ARKAN M.
IEEE International Electric Machines & Drives Conference (IEMDC) 2023, San-Francisco, Costa Rica, 15 - 18 May 2023
- III. **Detection of Rotor Bar Fault through Stray Flux Based Analytical Signal Angular Fluctuation Method**
GÖKTAŞ T., ARKAN M.
IEEE International Electric Machines & Drives Conference (IEMDC) 2023, San-Francisco, Costa Rica, 15 - 18 May 2023
- IV. **The Effects of Bearing Lubrication on Vibration, Acoustic and Stray Flux Signals in Induction Motors**
Er R., Altunel F., Can M., GÖKTAŞ T.
14th IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives, SDEMPED 2023, Chania, Greece, 28 - 31 August 2023, pp.417-422
- V. **IoT based Multi-Environmental Sensing System: Monitoring of Rotor Fault in Induction Motors**
GÖKTAŞ T., Er R., Altunel F., ARKAN M.
14th IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives, SDEMPED 2023, Chania, Greece, 28 - 31 August 2023, pp.285-290
- VI. **The Performance Evaluation of Machine Learning based Techniques via Stator Current and Stray Flux for Broken Bar Fault in Induction Motors**
Younas M. B., Ullah N., GÖKTAŞ T., ARKAN M., Gurusamy V.
2021 IEEE 13th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED), Dallas, United States Of America, 22 - 25 August 2021, pp.180-185
- VII. **A Comparative Study of Current, Vibration and Stray Magnetic Flux Based Detection for Parallel Misalignment Fault in Induction Motors**
GÖKTAŞ T., ARKAN M., Gurusamy V.
2021 IEEE 13th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED), Dallas, United States Of America, 22 - 25 August 2021, pp.11-16
- VIII. **Design, Simulation and Application of Microcontroller based DC-DC Buck Converter**
SUCU H., GÖKTAŞ T., YETİŞ H., ARKAN M.
International ICONTECH SYMPOSIUM-3 on Innovative Surveys in Positive Sciences, Oujda, Morocco, 28 - 29 January

2021, pp.187-196

- IX. Monitoring of Leakage Flux for Rotor Fault Detection under non-adjacent broken rotor bars in Induction Motors**
GÖKTAŞ T., EKİNCİ İ., YÜKLÜ N., ARKAN M., MAMIŞ M. S.
2019 International Conference on Applied Automation and Industrial Diagnostics (ICAAID), Elazig, Turkey, Turkey, 25 - 27 September 2019, pp.1-5
- X. Eksantriklik Arızası Durumunda Sürekli Mıknatıslı Senkron Motorlarda Stator Akım ve Kaçak Akının İzlenmesi**
GÜR M., GÖKTAŞ T., ARKAN M.
6. International Multidisciplinary Studies Congress, Gaziantep, Turkey, 26 - 27 April 2019, pp.183-188
- XI. Güç Transformatörlerinde Elektromanyetik Akı Dağılımının ve Nüve Kayıplarının Analizi**
ÖZÜPAK Y., DİKMEN S., GÖKTAŞ T., ARKAN M., MAMIŞ M. S.
Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı (ELECO 2018), Bursa, Turkey, 30 November - 01 December 2018, pp.102-105
- XII. Detection of eccentricity fault in permanent magnet synchronous motors through torque and speed spectrums**
GÜR M., GÖKTAŞ T., ARKAN M.
International Eurasian Conference on Science, Engineering and Technology, Ankara, Turkey, 22 - 23 November 2018, pp.2517-2522
- XIII. Üç Fazlı Güç Transformatörünün 3D Tasarımı ve Analizi**
TEKE İ. H., MAMIŞ M. S., GÖKTAŞ T., ÖZÜPAK Y.
International Engineering and Natural Sciences Conference (IENSC 2018), Diyarbakır, Turkey, 14 - 17 November 2018, pp.1867-1877
- XIV. Quartz Dolgulu, Dökme Reçineli, Kuru Tip Transformatör Prototipinin Tasarımı ve Gerçekleştirilmesi**
GÖKTAŞ T., DİKMEN S., MAMIŞ M. S., ARKAN M.
Güç Sistemleri Konferansı, Ankara, Turkey, 15 - 16 November 2018, pp.47-50
- XV. Design of Medium Voltage-36kV Cold Shrink Cable Joint and Electromagnetic Field Analysis**
GÖKTAŞ T., UZEL S., CÖMERT S., EMRE A., MAMIŞ M. S., ARKAN M.
International Conference on Energy Research, Alanya, Turkey, 31 October - 02 November 2018, pp.254-259
- XVI. Detection of Broken Bar Fault based on the Sidebands of Rotor Slot Harmonics in Leakage Flux**
EKİNCİ İ., GÖKTAŞ T., ARKAN M., MAMIŞ M. S.
International Conference on Energy Research, Alanya, Turkey, 31 October - 02 November 2018, pp.248-253
- XVII. Design of Computer Based Online Reactive Power Compensation Panel**
ERDEM E., GÜL K. N., GÖKTAŞ T., MAMIŞ M. S.
International Conference on Energy Research, Alanya, Turkey, 31 October - 02 November 2018, pp.242-247
- XVIII. Discriminating of Rotor Fault and Low Frequency Load Torque Oscillation Using Motor Square Current Signature Analysis**
GÖKTAŞ T., ARKAN M.
2018 XIII International Conference on Electrical Machines (ICEM), Alexandroupoli, Greece, 3 - 06 September 2018, pp.2365-2370
- XIX. Sabit Mıknatıslı Senkron Motorlar İçin Modüler Motor Montaj Sisteminin Tasarımı**
GÖKTAŞ T., ASLAN H., ARKAN M.
3. Uluslararası Mühendislik Mimarlık Tasarım Kongresi, Kocaeli, Turkey, 4 - 05 May 2018, pp.309
- XX. Separation of induction motor rotor faults and low frequency load oscillations through the radial leakage flux**
GÖKTAŞ T., ARKAN M., MAMIŞ M. S., AKIN B.
2017 IEEE Energy Conversion Congress and Exposition (ECCE), Cincinnati, OH, United States Of America, 1 - 05 October 2017
- XXI. Broken rotor bar fault monitoring based on fluxgate sensor measurement of leakage flux**
GÖKTAŞ T., ARKAN M., MAMIŞ M. S., AKIN B.
2017 IEEE International Electric Machines and Drives Conference (IEMDC), Miami, FL, USA, United States Of

America, 21 - 24 May 2017

- XXII. **Analysis of stator inter-turn short-circuit fault signatures for inverter-fed permanent magnet synchronous motors**
ÇIRA F., ARKAN M., GÜMÜŞ B., GÖKTAŞ T.
IECON 2016 - 42nd Annual Conference of the IEEE Industrial Electronics Society, Florence, Italy, Italy, 23 - 26 October 2016
- XXIII. **Analysis of magnet defect faults in permanent magnet synchronous motors through fluxgate sensors**
GÖKTAŞ T., Lee K. W., Zafarani M., Akin B.
2016 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, USA, United States Of America, 20 - 24 March 2016
- XXIV. **A comprehensive assessment of PM motor topology impact on magnet defect fault signatures**
Zafarani M., GÖKTAŞ T., Akin B.
2016 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, USA, United States Of America, 20 - 24 March 2016
- XXV. **A simplified mathematical approach to model and analyze magnet defects fault signatures in permanent magnet synchronous motors**
Mohsen Z., GÖKTAŞ T., Bilal A.
2015 IEEE Industry Applications Society Annual Meeting, Addison, TX, USA, United States Of America, 18 - 22 October 2015, pp.1-6
- XXVI. **A simplified numerical approach to analyze magnet defects in permanent magnet synchronous motors**
Mohsen Z., GÖKTAŞ T., Bilal A.
2015 IEEE Energy Conversion Congress and Exposition (ECCE), Montreal, QC, Canada, 20 - 24 September 2015, pp.6117-6121
- XXVII. **Separation of broken magnet and static eccentricity failures in PMSM**
GÖKTAŞ T., Mohsen Z., Bilal A.
2015 IEEE International Electric Machines Drives Conference (IEMDC), Coeur d Alene, ID, United States Of America, 10 - 13 May 2015
- XXVIII. **Separation harmonics for detecting broken bar fault in case of load torque oscillation**
GÖKTAŞ T., ARKAN M., Mohsen Z., Bilal A.
2015 IEEE International Electric Machines Drives Conference (IEMDC), Coeur d Alene, ID, United States Of America, 10 - 13 May 2015
- XXIX. **A comprehensive analysis of magnet defect faults in permanent magnet synchronous motors**
Mohsen Z., GÖKTAŞ T., Bilal A.
2015 IEEE Applied Power Electronics Conference and Exposition (APEC), Charlotte, NC, USA, 15 - 19 March 2015
- XXX. **Diagnosis of broken rotor fault in inverter-fed IM by using analytical signal angular fluctuation**
GÖKTAŞ T., ARKAN M.
2014 16th International Power Electronics and Motion Control Conference and Exposition, Antalya, Turkey, Turkey, 21 - 24 September 2014, pp.337-342
- XXXI. **A new method to separate broken rotor failures and low frequency load oscillations in three-phase induction motor**
GÖKTAŞ T., ARKAN M., ÖZGÜVEN Ö.
2013 9th IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (SDEMPED), VALENCIA, Spain, Spain, 27 - 30 August 2013
- XXXII. **Yenilenebilir Enerji Kaynakları ile Uyumlu Yüksek Güçlü Yükseltici Tip İki Paralel Kollu Konvertörün Tasarımı Gerçekleştirilmesi ve Kontrolü**
GÖKTAŞ T., ARKAN M., Murat İ. E.
Otomatik Kontrol Ulusal Toplantısı, TOK2013, Malatya, Turkey, 26 - 28 September 2013
- XXXIII. **Yüksek Güçlü Birim Güç Faktörlü Yükseltici Tip Konvertörün Kayma Mod Kontrolü**
GÖKTAŞ T., MURAT İ. E.
Elektrik-Elektronik, Bilgisayar Sempozyumu, Elazığ, Turkey, 5 - 07 October 2011

XXXIV. DSC Tabanlı Uzay Vektör Darbe Modülasyon Tekniğini Kullanan Kompakt Asenkron Motor Sürücüsünün Geliştirilmesi

GÖKTAŞ T., Murat İ. E., SÜNTER S.

Elektrik-Elektronik, Bilgisayar Sempozyumu, Elazığ, Turkey, 5 - 07 October 2011

Supported Projects

Göktaş T., Arkan M., TUBITAK Project, Asenkron Motorlarda Kaçak Akı ile Arızanın Türü, Büyüklüğü ve Arıza Noktasının Tespiti Kablosuz Anlık Durum İzleme Sisteminin Geliştirilmesi, 2018 - 2020

Göktaş T., Aydoğmuş Ö., TUBITAK Project, Fotovoltaik Panel İle Doğrudan Beslenebilen Senkron Relüktans Pompa Motoru Ve Maksimum Güç Noktası İzlemeli Kompakt Sürücü Tasarımı, 2017 - 2020

Göktaş T., Project Supported by Higher Education Institutions, Asenkron Motorlarda Rotor Çubuk Arızası ile Düşük Frekanslı Yük Salınımının Motor Faz Akımının Karesi Metoduyla Ayrıştırılması, 2018 - 2019

Göktaş T., Mamiş M. S., Project Supported by Higher Education Institutions, Geçici Rejim Altındaki Ölçü Transformatörlerinin Elektromanyetik Alan ve Isıl Analizlerinin Gerçekleştirilmesi, 2017 - 2019

Göktaş T., Project Supported by Higher Education Institutions, Üç Faz Tam Dalga Kontrollü Doğrultucunun Analizi, Tasarımı ve Gerçekleştirilmesi, 2018 - 2018

Göktaş T., Project Supported by Higher Education Institutions, Anahtarlamalı DC DC Cuk Çeviricinin Tasarımı ve Uygulanması, 2018 - 2018

Göktaş T., Akin B., Other International Funding Programs, Condition Monitoring of PM/IPM Motors through Axial/Radial Leakage Flux using Fluxgate Sensors, 2014 - 2017

Göktaş T., Arkan M., Project Supported by Higher Education Institutions, Sürücü ile Beslenen Bir Asenkron Motorda Rotor Hatalarının Gerçek Zamanlı Tespiti, 2013 - 2015

Activities in Scientific Journals

Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, Assistant Editor/Section Editor, 2021 - Continues

IEEE Transactions On Vehicular Technology, Editor, 2021 - Continues

Metrics

Publication: 50

Citation (WoS): 424

H-Index (WoS): 11

Scholarships

2214/A Doktora Sırası Yurt Dışı Araştırma, TUBITAK, 2014 - 2015