

## Assoc. Prof. RIDVAN DEMİR

### Personal Information

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### International Researcher IDs

ScholarID: [\\_eXq2KsAAAAJ](#)

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Publons / Web Of Science ResearcherID: [AAC-2612-2022](#)

ScopusID: [36650160300](#)

Yoksis Researcher ID: [28851](#)

### Education Information

Doctorate, Nigde Omer Halisdemir University, Institute Of Science, Electrical Electronic Engineering, Turkey 2012 - 2018

Postgraduate, Nigde Omer Halisdemir University, Institute Of Science, Electrical Electronic Engineering, Turkey 2008 - 2011

Undergraduate, Nigde Omer Halisdemir University, Faculty Of Engineering, Department Of Electrical And Electronic Engineering, Turkey 2003 - 2007

### Foreign Languages

English, B1 Intermediate

### Research Areas

Electrical and Electronics Engineering, Electric Motor Drivers

### Academic Titles / Tasks

Associate Professor, Kayseri University, Mühendislik, Mimarlık ve Tasarım Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2023 - Continues

Assistant Professor, Kayseri University, Mühendislik, Mimarlık ve Tasarım Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2021 - 2023

Assistant Professor, Nigde Omer Halisdemir University, Faculty Of Engineering, Department Of Mechatronics Engineering, 2018 - 2021

Lecturer, Nigde Omer Halisdemir University, Bor Vocational School, Department Of Electricity And Energy, 2009 - 2018

### Academic and Administrative Experience

Bölüm Akademik Teşvik Değerlendirme Komisyonu Üyesi, Kayseri University, Mühendislik, Mimarlık ve Tasarım Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2023 - Continues

BAP Scientific Commissioner, Kayseri University, Mühendislik, Mimarlık ve Tasarım Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2021 - Continues

Head of Department, Kayseri University, Mühendislik, Mimarlık ve Tasarım Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2021 - Continues

Assistant Director of the Institute, Kayseri University, Mühendislik, Mimarlık ve Tasarım Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2022 - 2022

## Courses

ELEKTRİK MOTORLARININ KONTROLÜ İÇİN GÖZLEMLEYİCİ TASARIMI, Doctorate, 2022 - 2023

## Supervised Theses

Demir R., DEVELOPMENTS OF ESTIMATION ALGORITHMS FOR SPEED-SENSORED AND SPEED-SENSORLESS CONTROL OF INDUCTION MOTORS, Postgraduate, Y.EMRE(Student), 2022

## Jury Memberships

Post Graduate, Post Graduate, Kayseri Üniversitesi, July, 2023

Doctoral Examination, Doctoral Examination, Erciyes Üniversitesi, November, 2022

Post Graduate, Post Graduate, Kayseri Üniversitesi, December, 2021

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

- I. **Speed-Sensorless model predictive current control of permanent magnet synchronous motors**  
Demir R., Gümüşcü D.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.40, no.1, pp.355-363, 2024 (SCI-Expanded)
- II. **Online estimations for electrical and mechanical parameters of the induction motor by extended Kalman filter**  
Yildiz R., Demir R., Barut M.  
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.2023, no.45, pp.2725-2738, 2023 (SCI-Expanded)
- III. **Speed-sensorless Predictive Current Controlled PMSM Drive With Adaptive Filtering-based MRAS Speed Estimators**  
Demir R.  
INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, vol.21, no.8, pp.2577-2586, 2023 (SCI-Expanded)
- IV. **Robust stator flux and load torque estimations for induction motor drives with EKF-based observer**  
DEMİR R.  
ELECTRICAL ENGINEERING, vol.105, no.1, pp.551-562, 2023 (SCI-Expanded)
- V. **Improved speed and load torque estimations with adaptive fading extended Kalman filter**  
Zerdali E., Yildiz R., Inan R., Demir R., Barut M.  
INTERNATIONAL TRANSACTIONS ON ELECTRICAL ENERGY SYSTEMS, vol.31, no.1, 2021 (SCI-Expanded)
- VI. **Speed-sensorless predictive torque controlled induction motor drive with feed-forward control of load torque for electric vehicle applications**  
Zerdali E., Demir R.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.29, no.1, pp.223-240, 2021

(SCI-Expanded)

- VII. **Extended Kalman filter based estimations for improving speed-sensored control performance of induction motors**  
Yildiz R., Barut M., Demir R.  
IET ELECTRIC POWER APPLICATIONS, vol.14, no.12, pp.2471-2479, 2020 (SCI-Expanded)
- VIII. **Novel hybrid estimator based on model reference adaptive system and extended Kalman filter for speed-sensorless induction motor control**  
Demir R., Barut M.  
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.40, no.13, pp.3884-3898, 2018 (SCI-Expanded)
- IX. **Real-Time Implementation of Bi Input-Extended Kalman Filter-Based Estimator for Speed-Sensorless Control of Induction Motors**  
Barut M., Demir R., Zerdali E., Inan R.  
IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, vol.59, no.11, pp.4197-4206, 2012 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Performance of model predictive current controlled IPMSM drive under different speed profiles for electric vehicles**  
Demir R.  
Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.13, no.4, pp.1478-1484, 2024 (Peer-Reviewed Journal)
- II. **Online stator and rotor resistance estimations of IM by using EKF**  
Yildiz R., Barut M., DEMİR R.  
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, no.6, pp.771-778, 2024 (ESCI)
- III. **Model Predictive Controlled IM Drive based on IT2FNN Controller**  
Demir R., Yıldız R., Gani A.  
Power Electronics and Drives , vol.8, no.43, pp.368-379, 2023 (ESCI)
- IV. **Speed-sensorless predictive torque control of the IM based on MRAS**  
Demir R., Yıldız R., Barut M.  
Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.12, no.1, pp.126-133, 2023 (Peer-Reviewed Journal)
- V. **EKF Based Model Predictive Torque Control of Induction Motors**  
Altınışık Y. E., Demir R.  
Avrupa Bilim ve Teknoloji Dergisi, vol.32, pp.858-863, 2021 (Peer-Reviewed Journal)
- VI. **Improved switching-EKF based field oriented control of induction motors**  
Altınışık Y. E., Demir R., Barut M.  
Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.10, no.2, pp.545-552, 2021 (Peer-Reviewed Journal)
- VII. **Reduced Order Extended Kalman Filter based Parameter Estimation for Induction Motor Drives**  
Demir R., Barut M.  
Gazi Üniversitesi Fen Bilimleri Dergisi Part: C Tasarım ve Teknoloji, vol.7, no.3, pp.591-603, 2019 (Peer-Reviewed Journal)
- VIII. **Reduced Order Extended Kalman Filter based Stator and Rotor Resistance Estimator for Speed-Sensored Direct Vector Controlled Induction Motors Drives**  
Demir R., Barut M., Yıldız R., Zerdali E., İnan R.  
EMO Bilimsel Dergi, vol.8, no.1, pp.79-84, 2018 (Peer-Reviewed Journal)
- IX. **Reduced order extended kalman filter based parameter estimations for speed-sensored induction motor drive**

DEMİR R., BARUT M., YILDIZ R.

Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi, vol.24, no.Özel Sayı, pp.1464-1471, 2018 (Peer-Reviewed Journal)

X. **HYBRID ESTIMATOR BASED DIRECT VECTOR CONTROL OF IM WITH SPEED-SENSOR**

İnan R., Demir R., Barut M.

Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.7, no.2, pp.612-623, 2018 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **System-level optimization of predictive torque controlled induction motor drive using lightning search algorithm**  
Yıldız R., Demir R., Zerdali E., Barut M.  
VI. International Turkic World Congress on Science and Engineering, Baku, Azerbaijan, 19 - 21 December 2024, vol.1, pp.12-23
- II. **Least mean Kurtosis algorithm-based MRAS estimator for speed-sensorless model predictive control of induction motor**  
Yıldız R., Demir R., Zerdali E., Barut M.  
V. International Turkic World Congress on Science and Engineering, Bishkek, Kyrgyzstan, 15 - 17 September 2023, vol.1, pp.80-92
- III. **Voltage Regulation of Negative Main Series Luo Converter Using Proportional-Integral Controller**  
Gani A., Demir R.  
Otomatik Kontrol Ulusal Toplantısı, İstanbul, Turkey, 14 - 16 September 2023, pp.1-5
- IV. **Speed-sensorless predictive torque control of IM based on the adaptive fading extended Kalman filter**  
Yıldız R., Demir R., Barut M.  
IV. International Turkic World Congress on Science and Engineering, Niğde, Turkey, 23 - 24 June 2022, pp.82-93
- V. **EKF Based Model Predictive Torque Control of Induction Motors**  
Altınışık Y. E., Demir R.  
International Conference on Design, Research and Development, Kayseri, Turkey, 15 - 18 December 2021, pp.205
- VI. **Adaptive Fading Extended Kalman Filter Based IM Drive Improved with Feed-Forward Control of Load Torque**  
Demir R., Yıldız R., Barut M.  
TURK-COSE 2021: III. International Turkic World Congress on Science and Engineering, Niğde, Turkey, 14 - 15 June 2021, pp.136-145
- VII. **Improved Speed-Sensorless Field-Oriented Controlled Induction Motor Drive With Feed-Forward Control of Load Torque**  
Demir R., Zerdali E.  
TURK-COSE 2020: 2. International Turkic World Congress on Science and Engineering, Astana, Kazakhstan, 14 - 15 November 2020, pp.525-532
- VIII. **Speed-Sensorless FCS-PTC Based Induction Motor Drive Capable of Disturbance Rejection**  
Zerdali E., Demir R., Barut M.  
2nd IEEE Global Power, Energy and Communication Conference, GPECOM 2020, Virtual, Izmir, Turkey, 20 - 23 October 2020, pp.170-175
- IX. Demir R.  
Otomatik Kontrol Ulusal Toplantısı (TOK'2019), Muğla, Turkey, 11 - 14 September 2019, pp.511-515
- X. **Improved Speed-Sensorless Input/Output Linearisation-Based SVPWM-DTC of im**  
İnan R., Demir R.  
1st IEEE Global Power, Energy and Communication Conference, GPECOM 2019, Nevşehir, Turkey, 12 - 15 June 2019, pp.222-226
- XI. Demir R., Yıldız R., Zerdali E., İnan R., Barut M.

Otomatik Kontrol Ulusal Toplantısı (TOK'2018), Kayseri, Turkey, 12 - 14 September 2018, pp.141-146

**XII. Adaptive Fading Extended Kalman Filter Based Speed-Sensorless Induction Motor Drive**

Zerdali E., Yildiz R., Inan R., Demir R., Barut M.

13th International Conference on Electrical Machines (ICEM), Alexandroupoli, Greece, 3 - 06 September 2018, pp.1367-1373

**XIII. EKF Based Rotor and Stator Resistance Estimations for Direct Torque Control of Induction Motors**

Demir R., Barut M., Yildiz R., Inan R., Zerdali E.

International Conference on Optimization of Electrical and Electronic Equipment (OPTIM) / Intl Aegean Conference on Electrical Machines and Power Electronics (ACEMP), Brasov, Romania, 25 - 27 May 2017, pp.376-381

**XIV. Load Torque and Stator Resistance Estimations with Unscented Kalman Filter for Speed-Sensorless Control of Induction Motors**

Yildiz R., Barut M., Zerdali E., Inan R., Demir R.

International Conference on Optimization of Electrical and Electronic Equipment (OPTIM) / Intl Aegean Conference on Electrical Machines and Power Electronics (ACEMP), Brasov, Romania, 25 - 27 May 2017, pp.456-461

**XV. Optimization of model reference adaptive system based speed estimation for speed sensorless control of induction motors via differential evolution algorithm**

Barut M., Yalcin M., Zerdali E., Demir R.

11th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing, ALCOSP 2013, Caen, France, 3 - 05 July 2013, vol.46, pp.27-32

**XVI. Speed-Sensorless Direct Torque Control System Using Bi-Input Extended Kalman Filter for Induction Motors**

Barut M., Demir R., Zerdali E., Inan R.

International Aegean Conference on Electrical Machines and Power Electronics / Electromotion Joint Conference, İstanbul, Turkey, 8 - 10 September 2011, pp.343-346

**XVII. Bi input-extended Kalman filter based speed-sensorless direct torque control of IMs**

Barut M., Demir R.

19th International Conference on Electrical Machines, ICEM 2010, Rome, Italy, 6 - 08 September 2010

## Supported Projects

DEMİR R., GANI A., YILDIZ R., Project Supported by Higher Education Institutions, Yüksek Başarımlı Hız Algılayıcısız Asenkron Motor ve Kalıcı Mıknatıslı Senkron Motor Sürücülerini İçin Yeni Hız Kestirim Yöntemlerinin Geliştirilmesi, 2022 - 2024

GANI A., DEMİR R., Project Supported by Higher Education Institutions, Yüksek Kazançlı DA/DA Çevirici için İleri Bulanık Mantık Tabanlı Denetim Yöntemlerinin Geliştirilmesi, 2022 - 2024

Barut M., Demir R., İnan R., Zerdali E., Yıldız R., Project Supported by Higher Education Institutions, 2016 - 2018

Barut M., TÜBİTAK Project, 2009 - 2011

## Activities in Scientific Journals

Eurasian Journal of Science Engineering and Technology, Committee Member, 2024 - Continues

Power Electronics and Drives , Special Issue Editor, 2023 - 2023

## Scientific Refereeing

Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, National Scientific Refreed Journal, December 2023

Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi, National Scientific Refreed Journal, December 2023

Recep Tayyip Erdoğan Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, National Scientific Refreed Journal, November

2023

PLOS ONE, Journal Indexed in SCI-E, September 2023

Gazi University Journal of Science Part A: Engineering and Innovation, National Scientific Refreed Journal, September 2023

El-Cezeri Journal of Science and Engineering, National Scientific Refreed Journal, September 2023

IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, Journal Indexed in SCI-E, July 2023

Power Electronics and Drives, Journal Indexed in ESCI, June 2023

IEEE ACCESS, Journal Indexed in SCI-E, May 2023

Power Engineering Letters, Journal Indexed in SCI-E, May 2023

IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, Journal Indexed in SCI-E, May 2023

Forschung Im Ingenieurwesen/Engineering Research, Journal Indexed in SCI-E, March 2023

Power Electronics and Drives, Journal Indexed in ESCI, March 2023

MEASUREMENTS & CONTROL, SCI Journal, January 2023

Power Electronics and Drives, Journal Indexed in ESCI, January 2023

IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, Journal Indexed in SCI-E, November 2022

IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, Journal Indexed in SCI-E, October 2022

MEASUREMENT AND CONTROL, Journal Indexed in SCI-E, April 2022

IEEE ACCESS, Journal Indexed in SCI-E, April 2022

IETE JOURNAL OF RESEARCH, Journal Indexed in SCI-E, January 2022

IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, SCI Journal, December 2020

ÖMER HALİSDEMİR ÜNİVERSİTESİ MÜHENDİSLİK BİLİMLERİ DERGİSİ, National Scientific Refreed Journal, November 2020

ÖMER HALİSDEMİR ÜNİVERSİTESİ MÜHENDİSLİK BİLİMLERİ DERGİSİ, National Scientific Refreed Journal, November 2020

Eurasian Journal of Science Engineering and Technology, Other Journals, August 2020

Eurasian Journal of Science Engineering and Technology, Other Journals, August 2020

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

## Metrics

Publication: 36

Citation (WoS): 236

Citation (Scopus): 291

H-Index (WoS): 8

H-Index (Scopus): 9

## Non Academic Experience

Anıt Mühendislik San.Tic.