

Prof. Mustafa Aktaş



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International Researcher IDs

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Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Elektrik Mühendisliği (Dr), Turkey 1998 - 2006

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Elektrik Mühendisliği (YI) (Tezli), Turkey 1995 - 1998

Undergraduate, Karadeniz Technical University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 1988 - 1992

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, TMS320C6711 DSP tabanlı hız sensörsüz doğrudan moment kontrollü asenkron motor sürücü, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Elektrik Mühendisliği (Dr), 2006

Postgraduate, Doğrusal Hareketli Asenkron Motorun Bulanık Mantık ile Kontrolü, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Elektrik Mühendisliği (YI) (Tezli), 1998

Research Areas

Electrical Machine Theory and Design, Electric Motor Drivers, Power Converters

Academic Titles / Tasks

Professor, Ondokuz Mayıs University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2021 - Continues

Associate Professor, Ondokuz Mayıs University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2018 -

2021

Associate Professor, Karabuk University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2014 - 2018

Assistant Professor, Karabuk University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2010 - 2014

Assistant Professor, Texas A&M University, Engineering Faculty, Electrical And Computer Engineering, 2010 - 2011

Assistant Professor, Ordu University, Teknik Bilimler Meslek Yüksekokulu, Elektronik Ve Otomasyon Bölümü, 2007 - 2010

Lecturer PhD, Ordu University, Meslek Yüksekokulu, Elektrik Pr., 2006 - 2007

Lecturer, Karadeniz Technical University, Ordu Meslek Yüksekokulu, Elektrik Pr., 1996 - 2006

Academic and Administrative Experience

Head of Department, Ondokuz Mayıs University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2018 - 2023

Courses

AC Sürücülerin Dinamik Davranışı ve Denetimi, Postgraduate, 2023 - 2024, 2022 - 2023

Sürücü Sistemler, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022

Güç Elektroniği, Undergraduate, 2022 - 2023, 2021 - 2022

Elektrik Makinaları I, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021

Değişken Hızlı Sürücü Düzenekler, Postgraduate, 2022 - 2023, 2021 - 2022

Elektrik Makinaları II, Undergraduate, 2022 - 2023, 2021 - 2022

Doğrusal Hareketli Elektromekanik Sistemler, Doctorate, 2022 - 2023

Elektrikli ve Hibrit Elektrikli Araçlar, Doctorate, 2022 - 2023, 2021 - 2022

Bilgisayar Destekli Sayısal Yöntemler, Postgraduate, 2021 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A New Adaptive Terminal Sliding Mode Speed Control in Flux Weakening Region for DTC Controlled Induction Motor Drive**
Çavuş B., Aktaş M.
IEEE Transactions on Power Electronics, vol.39, no.1, pp.449-458, 2024 (SCI-Expanded)
- II. **MPC-Based Flux Weakening Control for Induction Motor Drive With DTC for Electric Vehicles**
Çavuş B., Aktaş M.
IEEE TRANSACTIONS ON POWER ELECTRONICS, vol.38, no.4, pp.4430-4439, 2023 (SCI-Expanded)
- III. **Direct torque control versus indirect field-oriented control of induction motors for electric vehicle applications**
Aktaş M., Awaili K., Ehsani M., ARISOY A.
ENGINEERING SCIENCE AND TECHNOLOGY-AN INTERNATIONAL JOURNAL-JESTECH, vol.23, no.5, pp.1134-1143, 2020 (SCI-Expanded)
- IV. **LMC-based DTC for efficiency improvement of IM drives and their electric vehicle applications**
Aygun H., Aktaş M.
JOURNAL OF POWER ELECTRONICS, vol.20, no.5, pp.1232-1242, 2020 (SCI-Expanded)
- V. **A computer-aided educational tool for vector control of AC motors in graduate courses**
Çavuş B., Aktaş M.
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.28, no.3, pp.705-723, 2020 (SCI-Expanded)
- VI. **Comparison of DC link current and stator phase current in inverter switching faults detection of PMSM drives in HEVs**

Aktaş M., Aygun H.

ENGINEERING SCIENCE AND TECHNOLOGY-AN INTERNATIONAL JOURNAL-JESTECH, vol.21, no.4, pp.664-671, 2018 (SCI-Expanded)

VII. Soft Set-Based Switching Faults Decision Making in DTC Induction Motor Drives

Turkmenoglu V., Aktaş M., Karatas S., OKUMUŞ H. İ.

JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.24, no.2, 2015 (SCI-Expanded)

VIII. A Novel Method for Inverter Faults Detection and Diagnosis in PMSM Drives of HEVs based on Discrete Wavelet Transform

Aktaş M.

ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, vol.12, no.4, pp.33-38, 2012 (SCI-Expanded)

IX. Wavelet-based switching faults detection in direct torque control induction motor drives

Aktaş M., Turkmenoglu V.

IET SCIENCE MEASUREMENT & TECHNOLOGY, vol.4, no.6, pp.303-310, 2010 (SCI-Expanded)

X. Stator resistance estimation using ANN in DTC IM drives

Aktaş M., OKUMUŞ H. İ.

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.18, no.2, pp.197-210, 2010 (SCI-Expanded)

XI. Adaptive hysteresis band control for constant switching frequency in DTC induction machine drives

OKUMUŞ H. İ., Aktaş M.

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.18, no.1, pp.59-69, 2010 (SCI-Expanded)

XII. Speed Sensorless Direct Torque Control of Induction Motor Drives

Aktaş M., OKUMUŞ H. İ.

INSTRUMENTATION SCIENCE & TECHNOLOGY, vol.37, no.6, pp.708-719, 2009 (SCI-Expanded)

Articles Published in Other Journals

I. KKG kullanılan hız algılayıcısız SMSM için AYK ve DMK'nin karşılaştırılması

ÇAVUŞ B., AKTAŞ M.

ENGINEERING SCIENCES, vol.11, no.4, pp.898-903, 2022 (Peer-Reviewed Journal)

II. Current Reconstruction for PMSM Drives Using a DC-Link Single Current Sensor

Aktaş M., Çavuş B.

ELECTRICA, vol.22, no.1, pp.101-108, 2022 (ESCI)

III. Elektrikli Araç İçin Düşük Maliyetli Bir Batarya Yönetim Sistemi Tasarımı ve Gerçekleştirilmesi

AKTAŞ M., BAYGÜNEŞ B., KIVRAK S., ÇAVUŞ B., SÖZEN F.

Avrupa Bilim ve Teknoloji Dergisi, pp.227-238, 2020 (Peer-Reviewed Journal)

IV. Direct Torque Control of Permanent Magnet Synchronous Motor for Electric Vehicles

ÇAVUŞ B., AKTAŞ M.

International Journal of Automotive Engineering and Technologies, vol.9, no.2, pp.58-65, 2020 (Peer-Reviewed Journal)

V. A Novel DTC Method with Efficiency Improvement of IM for EV Applications

Aygun H., Aktaş M.

ENGINEERING TECHNOLOGY & APPLIED SCIENCE RESEARCH, vol.8, no.5, pp.3456-3462, 2018 (ESCI)

VI. A NEW METHOD IN NDT OF WOOD: THERMAL CONDUCTIVITY

Kurt Ş., KORKMAZ M., ÖZCAN C., DÜNDAR T., AKTAŞ M.

The Online Journal of Science and Technology, vol.7, no.3, pp.1-4, 2017 (Peer-Reviewed Journal)

Books & Book Chapters

I. Modern Elektrikli, Hibrit Elektrikli ve Yakıt Hücreli Taşıtlar

Aktaş M., Şahin F., Bakan A. F., Solmaz H., Topgöl T., Düzgün M., Şen O. T., Altın N., Gündoğdu T., Çınar C., et al.
Akademisyen Kitabevi, Ankara, 2021

II. Modern Taşımacılığın Çevreye Etkisi ve Tarihi

AKTAŞ M., ÖZGÖNENEL O., ALTIN N., SOLMAZ H., BAKAN A. F., ŞAHİN F., ÇINAR C., ŞEN O. T., DÜZGÜN M., TOPGÜL T., et al.

in: Modern Elektrikli, Hibrit Elektrikli ve Yakıt Hücreli Taşıtlar, Mustafa AKTAŞ, Editor, Akademisyen Kitabevi, Ankara, pp.1-16, 2021

III. Elektrikli Taşıtlar

AKTAŞ M., ŞAHİN F., BAKAN A. F., SOLMAZ H., TOPGÜL T., DÜZGÜN M., ŞEN O. T., ALTIN N., GÜNDOĞDU T., ÇINAR C., et al.

in: Modern Elektrikli, Hibrit Elektrikli ve Yakıt Hücreli Taşıtlar, Mustafa AKTAŞ, Editor, Akademisyen Kitabevi, Ankara, pp.95-112, 2021

Refereed Congress / Symposium Publications in Proceedings

I. Fuzzy Logic Speed Control of Induction Motor in Flux Weakening Region for Electric Vehicle

Çavuş B., Aktaş M.

2023 First International Conference on Cyber Physical Systems, Power Electronics and Electric Vehicles (ICPEEV),
Bahadurgarh, India, 28 - 30 September 2023

II. Current Reconstruction for Induction Motor Drives using a dc-link Single Current Sensor

AKTAŞ M., ÇAVUŞ B.

1st International Conference on Electrical-Electronics and Computer Engineering, Trabzon, Turkey, 24 - 25 July
2021

III. Parallel IGBT Inverter for Three Phase Induction Motor

Sozen F., Aktaş M., Çavuş B.

5th International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2021, Ankara,
Turkey, 21 - 23 October 2021, pp.577-580

IV. SABİT MIKNATISLI SENKRON MOTORUN MOMENT VE HIZ TEPKİSİNİN VEKTÖR KONTROLLE İYİLEŞTİRİLMESİ

AKTAŞ M., BAYGÜNEŞ B.

I. Ulusal Mühendislikte Bilimsel ve Mesleki Çalışmaları Kongresi, Nevşehir, Turkey, 27 - 30 June 2019, pp.2-3

V. Comparison of Direct Torque Control Method and Field Oriented Control Method for Induction Motor In Electric Vehicle

BAHADIR G., Karaoğlu O., AKTAŞ M.

First International Conference on Energy Systems Engineering, Karabük, Turkey, 2 - 04 November 2017

VI. DSP based Motor/Generator Operation of Induction Machine

METİN O., AKTAŞ M., AYGÜN H.

ICESE17, 1st International Conference on Energy Systems Engineering, Karabük, Turkey, 2 - 04 November 2017,
vol.1, pp.197-202

VII. A novel sensorless field oriented controller for Permanent Magnet Synchronous Motors

AYGÜN H., GÖKDAĞ M., AKTAŞ M.

Industrial Electronics (ISIE), 2014 IEEE 23rd International Symposium on, 1 - 04 June 2014, pp.715-720

VIII. Research on Control Strategy and Energy Consumption for Electric Vehicles

AKTAŞ M., ÖZTÜRK T.

IFAC Proceedings Volumes, Sao-Paulo, Brazil, 01 May 2013, vol.46, pp.444-449

IX. Direct torque control of induction machine drives using adaptive hysteresis band for constant switching frequency

AKTAŞ M., OKUMUŞ H. İ.

Electric Machines & Drives Conference, 2007. IEMDC '07. IEEE International, 3 - 05 May 2007

Supported Projects

Aktaş M., Project Supported by Higher Education Institutions, TEKNOMÜ Teknoloji Atölyesinin Teknoloji Odaklı Çalışmaların Çeşitliliği ve Farkındalığı Üzerindeki Rolü, 2022 - 2022

Activities in Scientific Journals

ENGINEERING SCIENCE AND TECHNOLOGY, AN INTERNATIONAL JOURNAL, Scientific Committee Membership, 2019 - Continues