

# Prof. FARUK ARAS

## Personal Information

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## Education Information

Doctorate, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Eğitimi Anabilim Dalı, Turkey 1996 - 2000

Post Graduate, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Eğitimi Anabilim Dalı, Turkey 1994 - 1996

Under Graduate, Marmara Üniversitesi, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü, Turkey 1990 - 1994

## Foreign Languages

English, B2 Upper Intermediate

## Certificates, Courses and Trainings

Education Management and Planning, EWIS (Aircraft Electrical. Wiring Interconnection System), THY Teknik, 2018

Education Management and Planning, SHT-147, THY Teknik, 2018

Education Management and Planning, SHT-145, THY Teknik, 2018

Education Management and Planning, İnsan Faktörü, THY Teknik, 2018

Education Management and Planning, SHT-66, THY Teknik, 2018

## Dissertations

Doctorate, Elektrik ve ısı gerilimler altında 154kV XLPE yeraltı güç kablosunun yaşlanma davranışının deneysel incelenmesi ve ampasite ile ilişkilendirilmesi, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Eğitimi, 2000

Post Graduate, Enerji iletim hatlarının bilgisayar destekli dijital koruması ve Bolu - Gerkonson hattına uygulanması, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Eğitimi, 1996

## Research Areas

Electrical and Electronics Engineering, Energy, Electric Power Transmission, Distribution and Protection, High Voltage Technique, Aeronautical and Space Engineering, Engineering and Technology

## Academic Titles / Tasks

Professor, Kocaeli Üniversitesi, Havacılık Ve Uzay Bilimleri Fakültesi, Uçak Elektrik-Elektronik, 2014 - Continues

Professor, Kocaeli Üniversitesi, Sivil Havacılık Yüksekokulu, Uçak Elektrik-Elektronik Bölümü, 2013 - 2014

Associate Professor, Kocaeli Üniversitesi, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü, 2008 - 2013

Assistant Professor, Kocaeli Üniversitesi, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü, 2001 - 2008

Research Assistant, Kocaeli Üniversitesi, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü, 1995 - 2001

Research Assistant, Gerhard-Mercator-Universitaet-Gesamthochschule Duisburg, Department Of Optoelectronics, Optoelectronics, 1998 - 1998

## Professional Experience

Head of Department, Kocaeli Üniversitesi, Havacılık Ve Uzay Bilimleri Fakültesi, Uçak Elektrik-Elektronik Bölümü, 2015 - Continues

Member of ADEK Commission, Kocaeli Üniversitesi, 2012 - 2014

Director of the Center, Kocaeli Üniversitesi, Sürekli Eğitim Merkezi, 2012 - 2014

Head of Department, Kocaeli Üniversitesi, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü, 2004 - 2012

Head of Department, Kocaeli Üniversitesi, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü, 2004 - 2010

Vice Dean, Kocaeli Üniversitesi, Teknik Eğitim Fakültesi, 2005 - 2006

## Courses

TEMEL ELEKTRİK, Under Graduate, 2016 - 2017

UÇAK ELEKTRİK SİSTEMLERİ, Under Graduate, 2016 - 2017

FİBER OPTİK SENSÖRLER VE HAVACILIK UYGULAMALARI, Post Graduate, 2016 - 2017

ELEKTRİK MAKİNALARI, Under Graduate, 2016 - 2017

## Advising Theses

Aras F., SANAL ORTAMDA TASARLANAN PROGRAMLANABİLİR DENETLEYİCİNİN GERÇEK ORTAMA UYGULANMASI VE ANALİZİ, Doctorate, H.Aydoğan(Student), 2019

ARAS F., HAVACILIKTA BAKIM GÜVENİLİRLİĞİ - ÖRNEK BİR UYGULAMA, Post Graduate, M.Muştu(Student), 2018

ARAS F., GÜÇ TRANSFORMATÖRLERİNİN YAŞLANMA DAVRANIŞININ İNCELENMESİ VE ÇEŞİTLİ KOŞULLAR ALTINDA YÜKLENEBİLİRLİK ANALİZİ, Doctorate, Y.Çilliyüz(Student), 2015

ARAS F., GÜÇ TRANSFORMATÖRLERİNİN İZLEME VE ARIZA ÖNLEME ODAKLI AKILLI YÖNETİM SİSTEMİNİN GELİŞTİRİLMESİ, Doctorate, Y.Biçen(Student), 2013

ARAS F., Fiber optik akım algılayıcısının modellenmesi ve sayısal benzetimi, Post Graduate, H.Aydoğan(Student), 2008

ARAS F., Güç kablolarının bilgisayar destekli analizi, Post Graduate, Y.Biçen(Student), 2006

ARAS F., Yapay sinir ağları ile çevre koşulları etkili bölgesel yük kestirimi, Post Graduate, Y.Çilliyüz(Student), 2006

ARAS F., "Harmoniklerin Yeraltı Güç Kablolarına Etkisinin Belirlenmesi" Kocaeli Üniversitesi, Post Graduate, Y.Gürcan(Student), 2006

ARAS F., Katı ve sıvı yalıtkanların delinme dayanım ve yaşlandırma testleri için 50 kV'luk yüksek gerilim hücresi tasarımı ve gerçekleştirilmesi, Post Graduate, K.Keleş(Student), 2005

ARAS F., Kendinden uyarımlı indüksiyon generatörü için düşük maliyetli gerilim denetleyici tasarımı ve gerçekleştirilmesi, Post Graduate, R.Sürkan(Student), 2004

## Jury Memberships

Doctorate, Doktora Tez Savunması, FBE, January, 2019

Associate Professor Exam, Doçentlik Sınavı/Elektrik-Elektronik Mühendisliği, ÜAK, June, 2015

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Design, simulation and virtual implementation of a novel fundamental programmable logic controllers laboratory in a 3D virtual world**

Aydogan H., ARAS F.

International Journal of Electrical Engineering Education, 2019 (Journal Indexed in SCI Expanded)

- **Investigation on Aging Mechanism of Polyester Under Combined Stresses**

CAN N., ARAS F., ALEKPEROV V. A. , ALTINDAL A.

IEEE ELECTRICAL INSULATION MAGAZINE, vol.32, pp.38-42, 2016 (Journal Indexed in SCI)

- **A robust algorithm based on a failure-sensitive matrix for fault diagnosis of power systems: an application on power transformers**

Bicen Y., ARAS F.

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.23, pp.298-315, 2015  
(Journal Indexed in SCI)

• **Loadability of power transformer under regional climate conditions: the case of Turkey**

Bicen Y., ARAS F.

ELECTRICAL ENGINEERING, vol.96, pp.347-358, 2014 (Journal Indexed in SCI)

• **Fuzzy logic-based user interface design for risk assessment considering human factor: A case study for high-voltage cell**

ARAS F., KARAKAS E., Bicen Y.

SAFETY SCIENCE, vol.70, pp.387-396, 2014 (Journal Indexed in SCI)

• **Lifetime Estimation and Monitoring of Power Transformer Considering Annual Load Factors**

Bicen Y., ARAS F., Kirkici H.

IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION, vol.21, pp.1360-1367, 2014 (Journal Indexed in SCI)

• **Thermal modelling and analysis of high-voltage insulated power cables under transient loads**

ARAS F., Bicen Y.

COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.21, pp.516-529, 2013 (Journal Indexed in SCI)

• **A realistic method for remaining service life prediction of power transformer**

Bicen Y., Aras F., İSMAİLOĞLU H.

International Review of Electrical Engineering, vol.8, pp.200-206, 2013 (Journal Indexed in SCI Expanded)

• **3D virtual classroom environment for teaching renewable energy production and substation equipment**

Aydogan H., KARAKAŞ E., ARAS F., Ozudogru F.

INTERNATIONAL JOURNAL OF ELECTRICAL ENGINEERING EDUCATION, vol.48, pp.294-306, 2011 (Journal Indexed in SCI)

• **MODELING AND SIMULATION OF FIBER OPTIC CURRENT SENSOR**

AYDOĞAN H., ARAS F.

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.23, pp.749-757, 2008 (Journal Indexed in SCI)

• **Thermal analysis of 154 kV underground cable joint using finite element method 154 kV XLPE yeraltı güç kablo ekinin sonlu elemanlar yöntemiyle ısıl analizi**

ARAS F., OYSU C.

Journal of the Faculty of Engineering and Architecture of Gazi University, vol.22, pp.281-286, 2007 (Journal Indexed in SCI Expanded)

• **Aging of 154 kV underground power cable insulation under combined thermal and electrical stresses**

Aras F., ALEKPEROV V., CAN N., KIRKICI H.

IEEE ELECTRICAL INSULATION MAGAZINE, vol.23, pp.25-33, 2007 (Journal Indexed in SCI)

• **Laboratory experiments for electrical insulation courses using a new high-voltage cell**

Aras F., Keles K.

INTERNATIONAL JOURNAL OF ELECTRICAL ENGINEERING EDUCATION, vol.44, pp.84-94, 2007 (Journal Indexed in SCI)

• **An assessment of the methods for calculating ampacity of underground power cables**

Aras F., OYSU C., YILMAZ G.

ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.33, pp.1385-1402, 2005 (Journal Indexed in SCI)

• **Effects of mechanical and thermal stresses on electric degradation of polyolefins and related materials**

Mamedov S., Alekperov V., Can N., Aras F., Yılmaz G.

MACROMOLECULAR SYMPOSIA, vol.212, pp.293-298, 2004 (Journal Indexed in SCI)

## Articles Published in Other Journals

• **İş Güvenliği Uzmanlarını Etkileyen Faktörlerin Risk Analizi ve Değerlendirme Süreçleri Üzerindeki Bağlı Etkilerinin Değerlendirilmesi**

ÇIKMAK S., BİÇEN Y., ARAS F.

TÜBAV Bilim Dergisi, vol.11, pp.22-33, 2018

- **Kısa ve Orta Enerji İletim Hatlarının Sayısal Analizi için bir Arayüz Tasarımı**  
AYDOĞAN H., ÖZSOY M. F. , ARAS F.  
Eğitim ve Öğretim Araştırmaları Dergisi, 2017
- **The Effects of a Case Based Learning Approach on the Achievement and Attitudes of Students Towards an Occupational Health and Safety Course in Turkey**  
GEÇER A., ERGÜN AMAÇ A., ARAS F.  
TEM Journal-Technology, Education, Management, Informatics, vol.2, pp.353-368, 2013
- **Dissolved Gas Analysis and Fault Diagnosis Interface for Oil Immersed Transformer Using Fuzzy Logic**  
BİÇEN Y., ARAS F., İNAL M. M. , İSMAİLOĞLU H.  
International Review of Automatic Control (I.RE.A.CO.), vol.5, pp.414-420, 2012 (Refereed Journals of Other Institutions)
- **Dissolved gas analysis and fault diagnosis interface for oil-immersed transformer using fuzzy logic**  
Biçen Y., Aras F., Inal M., Ismailoğlu H.  
International Review of Automatic Control, vol.5, pp.414-420, 2012 (Refereed Journals of Other Institutions)

## Refereed Congress / Symposium Publications in Proceedings

- **ELEKTRİK ENERJİSİ TEMEL KOMPANZASYON HESABI İÇİNSAYISAL BİR ARAYÜZ TASARIMI**  
AYDOĞAN H., ÖZSOY M. F. , ARAS F.  
9th International Congress on New Trends in Education, 10 May 2018 - 12 May 2017
- **HARMONIC BASED AGING AND COST ANALYSIS IN POWER SYSTEMS**  
BİÇEN Y., ARAS F., ÇİLLİYÜZ Y.  
International Conference on Research in Education and Science (ICRES), Muğla, Turkey, 28 April - 01 May 2018, pp.53
- **FİBER OPTİK DAĞITIK SENSÖRLERİN ÖZEL UYGULAMALARI**  
ARAS F.  
Uluslararası Mühendislik Araştırmaları Sempozyumu (UMAS'2017), 11 - 13 September 2017
- **Forecasting the Dielectric Properties of the Insulation Material using an Embedded ANN Microcontroller**  
AYDOĞAN H., ARAS F., KARAKAŞ E.  
1st International Symposium on Multidisciplinary Studies and Innovative Technologies, 2 - 04 November 2017, pp.226-229
- **Dielectric Liquids and Loadability Effects on Transformers**  
BİÇEN Y., ÇİLLİYÜZ Y., ARAS F., AYDUGAN G.  
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Budapest, Hungary, 3 - 07 May 2017, pp.157
- **Design of a Graphical User Interface for Analysis of a Fiber Optic Current Sensor**  
Aydogan H., ARAS F.  
10th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 30 Kasım - 02 Aralık 2017, pp.1332-1335
- **Steady State Effects of Design Properties and Environmental Conditions on Underground Power Cable Ampacity**  
Bicen Y., ARAS F.  
10th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 30 Kasım - 02 Aralık 2017, pp.81-84
- **The Effect of Temperature Rise on Lifetime of HV Power Cables in Crossing Region**  
ARAS F., BİÇEN Y.  
XIXth International Symposium on Electrical Apparatus and Technologies, Burgas, Bulgaria, 29 May - 01 June 2016, pp.33-34
- **The effects of Internal and External Factors on isk Analysis and Evaluation Process**  
BİÇEN Y., ŞİMŞEK BİÇEN M., ARAS F.  
Conference on Safety and Healthy 2016, 8 - 11 May 2016
- **a A study of education on power transformers in a virtual world**

Aydoğan H., ATA R., Ozen S., ARAS F.

5th World Conference on Educational Sciences (WCES), Rome, Italy, 5 - 08 Şubat 2013, vol.116, pp.3952-3956

• **Intelligent Condition Monitoring Platform Combined with Multi-agent Approach for Complex Systems**

Bicen Y., ARAS F.

IEEE Workshop on Environmental Energy and Structural Monitoring Systems (EESMS), Naples, Italy, 17 - 18 Eylül 2014, pp.149-152

• **Akıllı Şebekelerde Çoklu Etmen Sistemleri ve Arıza Tanılama Güç Transformatorü Uygulaması**

BİÇEN Y., ARAS F., İSMAİLOĞLU H.

Akıllı Şebekeler ve Türkiye Elektrik Şebekesinin Geleceği Sempozyumu, Ankara, Turkey, 24 - 26 Nisan 2013, pp.107-111

• **A Realistic Method for Remaining Service Life Prediction of Power Transformer**

BİÇEN Y., ARAS F., İSMAİLOĞLU H.

12th International Conference on Probabilistic Methods Applied to Power Systems, 10 Haziran - 14 Ekim 2012

• **An assessment on aging model of IEEE/IEC standards for natural and mineral oil-immersed transformer**

BİÇEN Y., ÇİLLİYÜZ Y., ARAS F., AYDUGAN G.

2011 IEEE International Conference on Dielectric Liquids, ICDL 2011, Trondheim, Norway, 26 - 30 June 2011

• **An assessment on distance education in a 3D virtual environment: How to produce electricity in a hydroelectric power plant**

Aydoğan H., ARAS F., KARAKAŞ E.

2010 2nd International Conference on Education Technology and Computer, ICETC 2010, Shanghai, China, 22 - 24 June 2010, vol.1

• **A Novel Gui Simulation Program Designed for Teaching of Underground Power Cables**

Bicen Y., ARAS F.

International Conference on Education Technology and Computer, Singapore, Singapore, 17 - 20 Nisan 2009, pp.20-21

• **Investigation of harmonic effects on underground power cables**

SAHİN Y. G. , ARAS F.

International Conference on Power Engineering Energy and Electrical Devices, Setubal, Portugal, 12 - 14 Nisan 2007, pp.589-594

## Supported Projects

ARAS F., Project Supported by Higher Education Institutions, Güç Transformatorlerini İzleme ve Arıza Önleme Odaklı Akıllı Yönetim Sisteminin Geliştirilmesi (Yunus BİÇEN Tez Projesi), 2010 - 2013

ARAS F., TUBITAK Project, Yüksek Isılı Trafolarda Natürel Ester İçinde Selüloz Bazlı İzolasyon Malzemesinin Kullanılması, 2011 - 2012

ARAS F., Project Supported by Higher Education Institutions, Güç Transformatorlerinin Yaşlanma Davranışının İncelenmesi ve Çeşitli Koşullar Altında Yüklenebilirlik Analizi (Yusuf ÇİLLİYÜZ Tez Projesi), 2010 - 2012

## Activities in Scientific Journals

Turkish Journal of Electrical Engineering & Computer Sciences,, Assistant Editor, 2010 - 2012

## Scientific Refereeing

Electric Power Systems Research (8 adet), SCI Journal, February 2018

Electric Power Components and Systems, SCI Journal, April 2017

Safety and Health at Work, Other Indexed Journal, April 2017

Safety Science - Journal - Elsevier, SCI Journal, September 2015

Journals of the Japan Society of Mechanical Engineers, SCI Journal, July 2015

Electric Power Systems Research (4 adet), National Scientific Refreed Journal, February 2015

IEEE Transactions on Dielectrics and Electrical Insulation, SCI Journal, June 2014  
Electric Power Systems Research (2 adet), National Scientific Refreed Journal, February 2014  
Electric Power Systems Research, SCI Journal, June 2013  
Turkish Journal of Electrical Engineering & Computer Sciences,, SCI Journal, May 2013  
Turkish Journal of Electrical Engineering & Computer Sciences,, SCI Journal, April 2012  
Computer Applications in Engineering and Education, SCI Journal, November 2011  
Computer Applications in Engineering and Education, SCI Journal, May 2010  
Energy, Institution of Civil Engineers journal, Other Indexed Journal, June 2008  
IEEE Transactions on Dielectrics and Electrical Insulation, SCI Journal, April 2008

## **Citations**

Total Citations (WOS):90

h-index (WOS):5