

Assoc. Prof. Revna ACAR VURAL

Personal Information

Office Phone: [+90 212 383 5919](tel:+902123835919)

Email: racar@yildiz.edu.tr

Web: <https://avesis.yildiz.edu.tr/racar>

International Researcher IDs

ORCID: 0000-0002-8587-5185

Publons / Web Of Science ResearcherID: AAX-5538-2020

Yoksis Researcher ID: 175118

Education Information

Doctorate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 2004 - 2011

Postgraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 2002 - 2004

Undergraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 1998 - 2002

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Particle Swarm Optimization for Electronic Circuit Design Automation, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2011

Postgraduate, Medikal Teşhiste GRNN Kullanımı ve Devre Bloklarının Tasarımı, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2004

Research Areas

Electrical and Electronics Engineering, Electronic, Electronic Circuits, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2021 - Continues

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2018 - Continues

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2013 - 2018

Research Assistant PhD, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2011 - 2013

Research Assistant, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2002 - 2011

Academic and Administrative Experience

BAP Koordinatör Yardımcısı, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2022 - Continues

Akademik İndeks Komisyonu Üyesi, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2020 - Continues

Bölüm Akademik Teşvik Değerlendirme Komisyonu Üyesi, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2020 - Continues

Sürelî Yayınlar Komisyonu Üyesi, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2020 - 2021

EHM Bölümü Uluslararası İlişkiler Komisyonu Başkanı, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2015 - 2021

Erasmus Coordinator, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2015 - 2021

EHM Bölüm Tanıtım Komisyonu Üyesi, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2013 - 2016

Courses

Computer Aided Circuit Design, Postgraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Electronic Circuits 2, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019

Electronic Circuits 1, Undergraduate, 2019 - 2020, 2018 - 2019

Switch Mode Power Supplies, Postgraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015

Advising Theses

Acar Vural R., Enerji Hasatlama Uygulamaları için DC-DC SEPIC Dönüştürücü Tasarımı, Postgraduate, İ.Güzeltepe(Student), 2021

Acar Vural R., Düşük Gerilimli Modüler Batarya Yönetimi, Postgraduate, Ö.Faruk(Student), 2021

Acar Vural R., AZALTICI TİP DÖNÜŞTÜRÜCÜ TABANLI MİKRO EVİRİCİ TASARIMI, Postgraduate, G.ÇİÇEK(Student), 2020

Acar Vural R., Evolutionary Optimization Methodology For Resonant Converter Design Considering Photovoltaic Systems, Doctorate, M.SAMI(Student), 2020

Acar Vural R., Titreşimi Algılayan ve Analiz Eden Kablosuz Gömülü Sistem Tasarımı, Postgraduate, B.CANATAR(Student), 2020

Acar Vural R., El hareketi tespit sensörü tasarımı, Postgraduate, K.TALHA(Student), 2019

Acar Vural R., Fluxgate Manyetometre Tasarımı, Postgraduate, S.TANRISEVEN(Student), 2017

Acar Vural R., Investigation of mosfet aging modeling on an analog circuit design, Postgraduate, H.KHALEEL(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

1. **High accuracy potentiostat with wide dynamic range and linearity**
Toprak S., Vural R., Batur O. Z.

AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.142, 2021 (SCI-Expanded)

- II. **Evolutionary Design Automation of High Efficiency Series Resonant Converter for Photovoltaic Systems**
Mohammed M. S., ACAR VURAL R.
IEEE TRANSACTIONS ON POWER ELECTRONICS, vol.35, no.11, pp.11332-11343, 2020 (SCI-Expanded)
- III. **Low voltage battery management system with internal adaptive charger and fuzzy logic controller**
Goksu O. F., ARABUL A. Y., Vural R. A.
Energies, vol.13, no.9, 2020 (SCI-Expanded)
- IV. **Improving coverage method of autonomous drones for environmental monitoring**
Yildirim O., ACAR VURAL R., Diepold K.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.28, no.6, pp.3352-3367, 2020 (SCI-Expanded)
- V. **NSGA-II plus FEM Based Loss Optimization of Three-Phase Transformer**
Mohammed M. S., Acar Vural R.
IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, vol.66, pp.7417-7425, 2019 (SCI-Expanded)
- VI. **Process independent automated sizing methodology for current steering DAC**
Vural R., Kahraman N., Erkmen B., Yildirim T.
INTERNATIONAL JOURNAL OF ELECTRONICS, vol.102, no.10, pp.1713-1734, 2015 (SCI-Expanded)
- VII. **A Mixed Mode Neural Network Circuitry for Object Recognition Application**
Erkmen B., Vural R., Kahraman N., Yildirim T.
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, vol.32, no.1, pp.29-46, 2013 (SCI-Expanded)
- VIII. **Analog active filter component selection with nature inspired metaheuristics**
Vural R., Bozkurt U., YILDIRIM T.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.67, no.3, pp.197-205, 2013 (SCI-Expanded)
- IX. **Performance Evaluation of Evolutionary Algorithms for Optimal Filter Design**
Vural R., YILDIRIM T., Kadioglu T., Basargan A.
IEEE TRANSACTIONS ON EVOLUTIONARY COMPUTATION, vol.16, no.1, pp.135-147, 2012 (SCI-Expanded)
- X. **Analog circuit sizing via swarm intelligence**
Vural R., YILDIRIM T.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.66, no.9, pp.732-740, 2012 (SCI-Expanded)
- XI. **Investigation of particle swarm optimization for switching characterization of inverter design**
Vural R., DER O., YILDIRIM T.
EXPERT SYSTEMS WITH APPLICATIONS, vol.38, no.5, pp.5696-5703, 2011 (SCI-Expanded)
- XII. **Particle swarm optimization based inverter design considering transient performance**
Vural R., DER O., YILDIRIM T.
DIGITAL SIGNAL PROCESSING, vol.20, no.4, pp.1215-1220, 2010 (SCI-Expanded)
- XIII. **Conic Section Function Neural Network Circuitry for Offline Signature Recognition**
Erkmen B., Kahraman N., Vural R., Yildirim T.
IEEE TRANSACTIONS ON NEURAL NETWORKS, vol.21, no.4, pp.667-672, 2010 (SCI-Expanded)

Articles Published in Other Journals

- I. **Touchless Authentication System Using Visual Fingertip Trajectories**
Akman V. M., ACAR VURAL R., Koc K. T.
ELECTRICA, vol.20, no.2, pp.143-152, 2020 (ESCI)
- II. **Gerçek Zamanlı Sürücü Yorgunluk Tespit Sistemi**
ACAR VURAL R., SERT M. Y., KARAKÖSE B.
Marmara Fen Bilimleri Dergisi, vol.30, pp.249-259, 2018 (Peer-Reviewed Journal)

- III. **AYRIŞTIRMALI YÜKSELTİCİ TİP GÜÇ DÖNÜŞTÜRÜCÜSÜ İÇİN GERÇEK ZAMANLI MİKRODENETLEYİCİLİ KONTROLÇÜ TASARIMI**
GÖKSU Ö. F., ACAR VURAL R.
Mühendislik Bilimleri ve Tasarım Dergisi, pp.282-293, 2018 (Peer-Reviewed Journal)
- IV. **Design and optimization of a power supply unit for low profile LCD/LED TVs**
Acar Vural R., Demirel İ., Erkmn B.
An International Journal of Optimization and Control: Theories and Applications, vol.7, pp.158-166, 2017 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Particle Swarm Optimization for Electronic Circuit Design Automation**
ACAR VURAL R.
Lambert Academic Publishing, 2012

Refereed Congress / Symposium Publications in Proceedings

- I. **Low Noise High Linearity Current Readout Topologies for Potentiostat Circuitry**
Toprak S., Acar Vural R., Batur O. Z.
32nd IEEE International Conference on Microelectronics (MIEL 2021), Nish, Serbia, 12 September 2021, pp.1-4
- II. **Minimizing Reactive Power of DAB Converters in EPS Control with Evolutionary Computation**
AKBOY E., ACAR VURAL R.
10th IEEE International Conference on Renewable Energy Research and Applications (ICRERA), İstanbul, Turkey, 26 - 29 September 2021, pp.351-356
- III. **Enerji Hasatlama Uygulamaları için 130nm DC-DC SEPIC Tasarımı ve Analizi**
Güzeltepe İ., Acar Vural R., Batur O. Z.
ELEKTRİK-ELEKTRONİK ve BİYOMEDİKAL MÜHENDİSLİĞİ (ELECO) KONFERANSI, Bursa, Turkey, 26 - 28 November 2020
- IV. **High Efficiency Design of PV Array Dimension Optimization for Shaded and Non-Shaded Configuration**
Mohammed M. S., ACAR VURAL R.
IEEE Global Conference for Advancement in Technology, 18 - 20 October 2019
- V. **TİTREŞİMİ ALGILAYAN VE ANALİZ EDEN KABLOSUZ GÖMÜLÜ SİSTEM TASARIMI**
Canatar B., Sarioğlu B., Acar Vural R.
INTERNATIONAL MARMARA SCIENCES CONGRESS, Kocaeli, Turkey, 1 - 03 November 2019
- VI. **Buck Dönüştürücü Tabanlı Mikro Evirici Tasarımı**
Çiçek G., ACAR VURAL R., KUL B.
Elektrik Elektronik Mühendisliği Kongresi 2019 (EEMKON2019), Turkey, 14 - 16 November 2019
- VII. **Charger Structure with Transistor Based Isolator for Parallel Charging of Series Connected Battery Cells**
GÖKSU Ö. F., ACAR VURAL R.
11th INTERNATIONAL CONFERENCE on ELECTRICAL and ELECTRONICS ENGINEERING, Bursa, Turkey, 28 - 30 November 2019
- VIII. **Decision Process of Autonomous Drones for Environmental Monitoring**
YILDIRIM Ö., DIEPOLD K., ACAR VURAL R.
International Symposium on INnovations in Intelligent SysTems and Applications (INISTA), 3 - 05 July 2019
- IX. **Speed Control Method Using Genetic Algorithm for Permanent Magnet Synchronous Motors**
DEMİR G., ACAR VURAL R.
6th International Conference on Control Engineering and Information Technologies, 25 - 27 October 2018,

pp.1009-1014

- X. **Battery Management Module with Active Balancing and Cell Switching**
GÖKSU Ö. F., ACAR VURAL R.
6th International Conference on Control Engineering and Information Technologies, 25 - 27 October 2018, pp.617-622
- XI. **Force resistive sensor network calibration method via regression analysis** **Rezistif kuvvet sensör ağının regresyon analizi ile kalibrasyon yöntemi**
Kurt I., Vural R.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- XII. **Design of solar powered subscale glider for CanSat competition**
ALİYEV İ., MISIRLI C., ÖZTÜRK S., MAHMURAT E., ERKEK A., KÖK S., KOÇYİĞİT D., UZUN S., ACAR VURAL R.
2017 8th International Conference on Recent Advances in Space Technologies (RAST), Istanbul, Turkey, 19 - 22 June 2017
- XIII. **Embedded System Based Strategical Positioning with RFID**
Dundar Y., Vural R.
National Conference on Electrical, Electronics and Biomedical Engineering (ELECO), Bursa, Turkey, 1 - 03 December 2016, pp.406-410
- XIV. **A Low Cost and Simple Fluxgate Magnetometer Implementation**
Tanriseven S., Can H., Topal U., Birlikseven C., Vural R. A.
International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD), İstanbul, Turkey, 07 September 2015
- XV. **Evolutionary Algorithms Based Analog Filter Approximation and Implementation**
Acar Vural R., Ayten U. E.
2014 IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA), Bari, Italy, 23 June 2014, pp.381-388
- XVI. **Evrimsel Algoritma Tabanlı Analog Süzgeç Optimizasyonu**
ACAR VURAL R., Ayten U. E.
2014 22nd Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 April 2014, pp.1-4
- XVII. **Metaheuristics Based CMOS Two-Stage Comparator Optimization**
ACAR VURAL R., BOZKURT U., YILDIRIM T.
World Congress on Engineering and Computer Science 2013, California, United States Of America, 23 October 2013, vol.2, pp.1-6
- XVIII. **CMOS Differential Amplifier Area Optimization with Evolutionary Algorithms**
ACAR VURAL R., ERKMEN B., BOZKURT U., YILDIRIM T.
The World Congress on Engineering and Computer Science (WCECS), San-Francisco, United States Of America, 23 - 25 October 2013, vol.2, pp.666-670
- XIX. **Optimization of High Pass Filter Approximation with Evolutionary Algorithms**
AYTEN U. E., Vural R.
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- XX. **Optimized Analog Filter Approximation via Evolutionary Algorithms**
Acar Vural R., Ayten U. E.
2012 12th International Conference on Intelligent Systems Design and Applications (ISDA), Kochi, India, 27 November 2012, pp.485-490
- XXI. **Low-pass Filter Approximation with Evolutionary Techniques**
ACAR VURAL R., Yildirim T.
7th International Conference on Electrical and Electronics Engineering (ELECO'2011), Bursa, Turkey, 01 December 2011, pp.125-129
- XXII. **Swarm Intelligence Based Sizing Methodology for CMOS Operational Amplifier**
ACAR VURAL R., Yildirim T.

CINTI 2011 12th IEEE International Symposium on Computational Intelligence and Informatics, Budapeşte, Hungary, 21 November 2011, pp.525-528

XXIII. State Variable Filter Design Using Particle Swarm Optimization

ACAR VURAL R., Yildirim T.

2010 XIth International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design (SM2ACD), Gammath, Tunisia, 04 October 2010, pp.1-6

XXIV. Artificial Bee Colony Optimization Based CMOS Inverter Design Considering Propagation Delays

Delican Y., ACAR VURAL R., YILDIRIM T.

2010 XIth International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design (SM2ACD), Gammath, Tunisia, 05 October 2010, pp.1-4

XXV. Component Value Selection for Analog Active Filter Using Particle Swarm Optimization

Vural R. A., YILDIRIM T.

2nd International Conference on Computer and Automation Engineering (ICCAE), Singapore, Singapore, 26 - 28 February 2010, pp.25-28

XXVI. Parçacık Sürü Optimizasyonu Tabanlı Evirici Tasarımı

DER O., ACAR VURAL R., YILDIRIM T.

ELECO 2008, Turkey, 26 - 30 November 2008

XXVII. Object recognition on general purposed conic section function neural network integrated circuit

Genel amaçlı konik kesit fonksiyonlu sinir ağı tümdevresi üzerinde obje tanıma

Vural R., Kahraman N., Erkmen B., Yildirim T.

2008 IEEE 16th Signal Processing, Communication and Applications Conference, SIU, Aydın, Turkey, 20 - 22 April 2008

XXVIII. Genel Amaçlı Konik Kesit Fonksiyonlu Sinir Ağı Tümdevresi Üzerinde Obje Tanıma

ACAR VURAL R., KAHRAMAN N., ERKMEN B., YILDIRIM T.

SIU 2008 2008 IEEE 16th Signal Processing, Communication and Applications Conference, Turkey, 20 - 22 April 2008

XXIX. Optimization of integrated circuits using an artificial intelligence algorithm

Vural R. A., YILDIRIM T.

PRIME - 4th Ph.D. Research in Microelectronics and Electronics Conference 2008, İstanbul, Turkey, 22 - 25 June 2008, pp.13-15

XXX. Genel Amaçlı Konik Kesit Fonksiyonlu Sinir Ağı Tümdevresi Üzerinde Obje Tanıma

ACAR VURAL R., Kahraman N., Erkmen B., Yildirim T.

IEEE 16. Sinyal İşleme ve Uygulamaları Sempozyumu (SİU2008), Aydın, Turkey, 20 April 2008, pp.1-5

XXXI. Efficient Training of Recurrent Neural Nets for Macromodeling p MOSFET at Microwave Frequencies Using Levenberg Marquardt Learning Algorithm

ACAR VURAL R., ERKMEN B.

Proceedings of the Ninth International Conference on Engineering Applications of Neural Networks (EANN), Lille - Fransa, 1 August - 03 December 2005, vol.1, pp.171-178

XXXII. Macromodeling P MOSFET at Microwave Frequencies Using Elman Network

ERKMEN B., ACAR VURAL R., ŞENGÖR N. S.

International Conference on Applied Electronics, Pilsen - Çek Cumhuriyeti, 1 - 03 September 2004, pp.105-108

XXXIII. An artificial neural network approach to diagnosis of erythemato-squamous disease

ACAR VURAL R., Yildirim T.

NEU-CEE 2004 2nd International Symposium on Electrical and Computer Engineering, Lefkoşa, Cyprus (Kktc), 11 March 2004, pp.230-233

Supported Projects

ERKMEN B., Elkatmış M. E., ACAR VURAL R., NİYAZ Ö., BATUR O. Z., ELKATMIŞ N., SÜRKİT İ. F., Project Supported by Higher Education Institutions, Nöromorfik İşlemci Tabanlı Enerji Etkin Görüntü Sınıflandırma Sistemi, 2021 - Continues

TÜRKER TOKAN N., ACAR VURAL R., GÜLSEREN A. H., Project Supported by Higher Education Institutions, Ka-Bant Uydu Haberleşmesi için Çoklu Hüzmeli Yansıtıcı Dizi Anten Tasarımı, 2021 - Continues

Acar Vural R., Erkmen B., Özkul A., Çabalar M., Pamuk B., Turkey Institutes of Health Administration Project, Çoklu Sensör Veri Füzyonu ve Yapay Zeka Destekli Bası Yarası İzleme ve Değerlendirme Sistemi, 2022 - 2024

TÜRKER TOKAN N., ACAR VURAL R., Şahin U., SERİNKEN E. S., Project Supported by Higher Education Institutions, Üç Bantlı Milimetre Dalga Frekans Seçici Yüzeylerin Yapay Zeka Algoritmaları ile Analizi ve Sentezi, 2021 - 2022

ÖZKAYA B., AÇIKGÖZ Ö., BALIK D., DALKILIÇ A. S., BİLGİLİ M. S., KAVANOZ S., ACAR VURAL R., TOPUZOĞULLARI M., KAYA İ., ŞEHİTOĞLU Y., et al., Project Supported by Higher Education Institutions, Yayıncısı Yıldız Teknik Üniversitesi olan akademik dergilerimiz için iyileştirilmiş güncel ve sürdürülebilir bir yapılanma sağlanarak dergilerin etkinliğinin ve Üniversitemizin tanınırlığının artırılması, 2021 - 2022

Acar Vural R., Erkmen B., Batur O. Z., Sarıoğlu B., Project Supported by Higher Education Institutions, Optik Girişli İğnecikli Yapay Sinir Ağları Tümlşik Devre Tasarımı, 2020 - 2022

Erkmen B., Türker Tokan N., Acar Vural R., Aydın N., Tuzkaya U. R., Eren Y., Erdinç O., Edalı M., Sayar G., Demir Ö., et al., Technopark, Sanayide Dijital Dönüşüm Eğitim ve Danışmanlık Merkezi Projesi, 2021 - 2021

Yıldırım T., Kahraman N., Bolat B., Acar Vural R., Erkmen B., Ayten U. E., Müftüoğlu Z., Kurban O. C., Uysal H., Uysal S., Development Agency, Cyber Security and Biometric Research Consultancy and Test Center, 2014 - 2016

Acar Vural R., Erkmen B., Company, Yeni Teknolojiye Uygun Televizyonlar İçin Güç Kaynağı Optimizasyonu, 2012 - 2013

Yıldırım T., Acar Vural R., Kahraman N., Erkmen B., Project Supported by Higher Education Institutions, Electronic Circuit Design Automation with Particle Swarm Optimization and Artificial Neural Networks, 2010 - 2012

Yıldırım T., Kahraman N., Erkmen B., Acar Vural R., Project Supported by Higher Education Institutions, Design of Short Channel CMOS Circuits with Artificial Neural Networks Independent from Production Technology Parameters, 2006 - 2009

Yıldırım T., Erkmen B., Kahraman N., Acar Vural R., Avcı M., TUBITAK Project, Implementation of a General Purpose Artificial Neural Network with Mixed Hardware, 2005 - 2008

Yıldırım T., Özyılmaz L., Acar Vural R., Project Supported by Higher Education Institutions, Investigation of the Use of Artificial Neural Networks (ANN) in the Medical Field, 2004 - 2005

Activities in Scientific Journals

Düzce Üniversitesi Bilim ve Teknoloji Dergisi, Editor, 2021 - Continues

Scientific Refereeing

IEEE Congress on Evolutionary Computation, SCI Journal, April 2013

IEEE Transactions on Cybernetics, SCI Journal, February 2013

Sinyal İşleme ve İletişim Uygulamaları Kurultayı, National Scientific Refreed Journal, February 2013

Circuits, Systems & Signal Processing, SCI Journal, October 2012

IEEE Sinyal İşleme ve İletişim Uygulamaları, National Scientific Refreed Journal, February 2012

International Journal of Electronics, SCI Journal, September 2011

EMO Bilimsel Dergi, National Scientific Refreed Journal, March 2011

International Symposium on INnovations in Intelligent SysTems and Applications, SCI Journal, February 2009

IEEE Transactions on Systems, Man and Cybernetics, SCI Journal, December 2008

Metrics

Publication: 55

Citation (WoS): 271

Citation (Scopus): 357

H-Index (WoS): 8

H-Index (Scopus): 7