

Prof. Herman SEDEF

Personal Information

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Education Information

Doctorate, Yildiz Technical University, Faculty Of Electrical & Electronics, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 1987 - 1993

Postgraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 1985 - 1987

Undergraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 1980 - 1984

Foreign Languages

English, B1 Intermediate

Dissertations

Doctorate, Akım Taşıyıcıları Kullanarak Aktif Devre Sentezinde Yeni Olanaklar, Yıldız Teknik Üniversitesi, Faculty of Electrical & Electronics, Elektronik Ve Haberleşme, 1994

Research Areas

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

Academic Titles / Tasks

Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2007 - Continues

Associate Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2000 - 2007

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 1994 - 2000

Research Assistant, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 1986 - 1994

Academic and Administrative Experience

Head of Department, Yildiz Technical University, Faculty Of Electrical & Electronics, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2016 - 2022

Courses

Active Filter Synthesis, Postgraduate, 2022 - 2023

LİNEER OLMAYAN DEVRELERİN ANALİZİ, Doctorate, 2017 - 2018

Advising Theses

Sedef H., Obdan A. H., Tek Aşamalı Geri Dönüştürücü Aktif PFC Dönüştürücü, Doctorate, A.SEMERCİYAN(Student), Continues SEDEF H., Memristör simülasyonu ve uygulamaları, Doctorate, Z.Gülru(Student), 2018

SEDEF H., Kardiyovasküler sistemde pulsatil akışın modellenmesi ve kontrolü, Doctorate, S.YILMAZ(Student), 2011

SEDEF H., Yeni aktif eleman yapıları ve analog devre tasarımındaki uygulamaları, Doctorate, U.Engin(Student), 2009

SEDEF H., Akım taşıyıcı tabanlı aktif elemanlar kullanılarak yeni filtre yapıları ve tasarım yöntemleri, Doctorate, M.SAĞBAŞ(Student), 2007

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Enhancing control of dynamic flow systems through innovator controller design and parametric polynomial modeling**
YILMAZ S., SEDEF H.
Journal of the Brazilian Society of Mechanical Sciences and Engineering, vol.46, no.7, 2024 (SCI-Expanded)
- II. **An efficient lung sound classification technique based on MFCC and HDMR**
Arar M. E., SEDEF H.
Signal, Image and Video Processing, vol.17, no.8, pp.4385-4394, 2023 (SCI-Expanded)
- III. **Behavioral modeling for low-voltage pentacene-based OTFTs and their implementations for organic logic circuits**
AKKAN N., Altun M., SEDEF H.
Engineering Science and Technology, an International Journal, vol.37, 2023 (SCI-Expanded)
- IV. **Realization of Logic Functions Using Switching Lattices Under a Delay Constraint**
Aksoy L., AKKAN N., SEDEF H., Altun M.
IEEE TRANSACTIONS ON COMPUTER-AIDED DESIGN OF INTEGRATED CIRCUITS AND SYSTEMS, vol.40, no.10, pp.2036-2048, 2021 (SCI-Expanded)
- V. **A New PID Controller Circuit Design Using CFOAs**
ÇAM TAŞKIRAN Z. G., SEDEF H., Anday F.
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, vol.40, no.3, pp.1166-1182, 2021 (SCI-Expanded)
- VI. **A new universal mutator circuit for memcapacitor and meminductor elements**
Çam Taşkıran Z. G., Sağbaş M., Ayten U. E., Sedef H.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.119, 2020 (SCI-Expanded)
- VII. **Realization of memristor-based chaotic rossler circuit**
Taskiran Z. G., Sedef H.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.35, no.2, pp.765-774, 2020 (SCI-Expanded)
- VIII. **Modeling and Parameter Extraction of OFET Compact Models Using Metaheuristics-Based Approach**
Akkan N., Altun M., Sedef H.

IEEE ACCESS, vol.7, pp.180438-180450, 2019 (SCI-Expanded)

- IX. **A novel memristive true random number generator design**
Çam Z. G., Taşkıran M., Killoğlu M., Kahraman N., Sedef H.
COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING, vol.38, no.6, pp.1931-1947, 2019 (SCI-Expanded)
- X. **Dual-Output Operational Transconductance Amplifier-Based Electronically Controllable Memristance Simulator Circuit**
Taskiran Z. G., Ayten U. E., Sedef H.
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, vol.38, pp.26-40, 2019 (SCI-Expanded)
- XI. **Voltage Differencing Gain Amplifier-Based nth-Order Low-Pass Voltage-Mode Filter**
Taskiran Z. G., SEDEF H., Anday F.
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.27, no.6, 2018 (SCI-Expanded)
- XII. **A New Floating Memristance Simulator Circuit Based on Second Generation Current Conveyor**
Cam Z. G., Sedef H.
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.26, no.2, 2017 (SCI-Expanded)
- XIII. **Modified Gorski-Popiel Technique and Synthetic Floating Transformer Circuit Using Minimum Components**
Sagbas M., Ayten U. E., Sedef H., Minaei S.
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.26, 2017 (SCI-Expanded)
- XIV. **Reply to comment on "Electronically tunable floating inductance simulator"**
Sagbas M., Ayten U. E., Sedef H., Koksall M.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.66, pp.86-88, 2012 (SCI-Expanded)
- XV. **Optimal in vitro realization of pulsatile coronary artery flow waveforms using closed-loop feedback algorithms with multiple flow control devices**
Yilmaz S., Toker O., Arslan N., SEDEF H.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.20, no.6, pp.1006-1030, 2012 (SCI-Expanded)
- XVI. **Current mode leapfrog ladder filters using a new active block**
Ayten U. E., Sagbas M., Sedef H.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.64, pp.503-511, 2010 (SCI-Expanded)
- XVII. **Current and voltage transfer function filters using a single active device**
Sagbas M., Ayten U. E., Sedef H.
IET CIRCUITS DEVICES & SYSTEMS, vol.4, pp.78-86, 2010 (SCI-Expanded)
- XVIII. **Floating Immittance Function Simulator and Its Applications**
Sagbas M., Ayten U. E., Sedef H., Koksall M.
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, vol.28, pp.55-63, 2009 (SCI-Expanded)
- XIX. **Electronically tunable floating inductance simulator**
Sagbas M., Ayten U. E., Sedef H., Koksall M.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.63, pp.423-427, 2009 (SCI-Expanded)
- XX. **AN ELECTRONICALLY TUNABLE OSCILLATOR USING A SINGLE ACTIVE DEVICE AND TWO CAPACITORS**
Koksall M., Sagbas M., SEDEF H.
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.17, no.5, pp.885-891, 2008 (SCI-Expanded)
- XXI. **Current-controllable fully-integrated inductor simulator using CCCIs**
SEDEF H., Sagbas M., Acar C.
INTERNATIONAL JOURNAL OF ELECTRONICS, vol.95, no.5, pp.425-429, 2008 (SCI-Expanded)
- XXII. **Realization of nth-order current transfer function using current-differencing buffered amplifiers**
Acar C., Sedef H.

- INTERNATIONAL JOURNAL OF ELECTRONICS, vol.90, no.4, pp.277-283, 2003 (SCI-Expanded)
- XXIII. **On the realisation of voltage-mode filters using CDBA**
SEDEF H., Acar C.
FREQUENZ, vol.54, pp.198-202, 2000 (SCI-Expanded)
- XXIV. **Nth-order lowpass voltage transfer function synthesis using current feedback amplifiers**
Anday F., Sedef H.
FREQUENZ, vol.54, pp.209-210, 2000 (SCI-Expanded)
- XXV. **Nth-order lowpass current transfer function synthesis using CCII based unity gain current followers**
Acar C., Sedef H.
FREQUENZ, vol.54, pp.180-181, 2000 (SCI-Expanded)
- XXVI. **A new floating inductor circuit using differential voltage current conveyors**
Sedef H., Acar C.
FREQUENZ, vol.54, pp.123-125, 2000 (SCI-Expanded)
- XXVII. **A new floating FDNR circuit using differential voltage current conveyors**
SEDEF H., Acar C.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.54, no.5, pp.297-301, 2000 (SCI-Expanded)
- XXVIII. **Simulation of resistively terminated LC ladder filters using a new basic cell involving current conveyors**
SEDEF H., Acar C.
MICROELECTRONICS JOURNAL, vol.30, no.1, pp.63-68, 1999 (SCI-Expanded)

Articles Published in Other Journals

- I. **A New Chaotic Attractor for Random Number Generation Based on Memristive Circuit**
ÇAM TAŞKIRAN Z. G., TAŞKIRAN M., KAHRAMAN N., SEDEF H.
World Journal of Engineering Research and Technology, vol.4, no.1, pp.82-91, 2018 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Chaotic Lorenz Synchronization Circuit Design for Secure Communication**
Deniz H. İ., ÇAM Z. G., SEDEF H.
IEEE 6th International Conference on Control Engineering Information Technology CEIT2018, İstanbul, Turkey, 25 - 27 October 2018
- II. **An Analog Chaotic Lorenz Circuit Based on CCII and Multiplier**
Deniz H. İ., ÇAM Z. G., SEDEF H.
2018 41st International Conference on Telecommunications and Signal Processing (TSP), Athens, Greece, 4 - 06 July 2018
- III. **Parameter Extraction Method Using Hybrid Artificial Bee Colony Algorithm for an OFET Compact Model**
Akkan N., Altun M., Sedef H.
2018 15th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD), Praha, Czech Republic, 2 - 05 July 2018, pp.105-108
- IV. **Generalized regression neural network based efficient memristor modeling**
Cam Z. G., Cimen S., SEDEF H.
10th International Conference on Intelligent Systems and Control, ISCO 2016, Coimbatore, India, 7 - 08 January 2016
- V. **Wireless Mobile Robot Control With Tablet Computer**
ERŞAHİN G., SEDEF H.

World Conference on Technology, Innovation and Entrepreneurship, 28 - 30 May 2015, pp.2874-2882

- VI. **Koroner Sinyalinin In-Vitro Sistemde Çeşitli Akış Kontrol Cihaz ve Kapalı Çevrim Algoritmalar ile Gerçeklenmesi**
SEDEF H.
Tıp Teknolojileri Ulusal Kongresi & 16. Biyomedikal Mühendisliği Ulusal Toplantısı, 01 October 2011
- VII. **FPGA Kullanarak 16 Bitlik Mikroişlemci Tasarımı**
ÖZTÜRK E., SEDEF H.
ELECO 2010 Elektrik-Elektronik-Bilgisayar Mühendisliği Sempozyumu, Turkey, 2 - 05 December 2010
- VIII. **Femoral ve Koroner Atardamar MRI Görüntülerinden, Kan Akış Sinyallerinin In Vitro Sistemde Oluşturulması**
YILMAZ S., ARSLAN N., TOKER O., SEDEF H.
V. Ulusal Biyomekanik Kongresi, Turkey, 23 - 25 September 2010
- IX. **Pulsatil Akış sinyalinin AC Pompa ve Oransal Pnömatik Valf Kullanarak Deneysel Olarak Benzetimi ve Karşılaştırılması**
SEDEF H.
Biyomut, 01 April 2010
- X. **PID ve P-Dinamik Değişim Sınırlayıcı (P-DDS) ile Debi Kontrolü**
SEDEF H.
Otomatik Kontrol Türk Milli Komitesi Otomatik Kontrol Ulusal Toplantısı, 01 October 2009
- XI. **Otomatik Park Sistemi**
SEDEF H.
Otomatik Kontrol Türk Milli Komitesi Otomatik Kontrol Ulusal Toplantısı, 01 October 2009
- XII. **Current-Mode SITO Filter Using a Single Active Component**
SEDEF H.
European Conference on Circuit Theory and Design, 01 August 2009
- XIII. **Current-Mode SITO Filter Using a Single Active Component**
Ayten U. E., Sagbas M., Sedef H.
European Conference on Circuit Theory Design, Antalya, Turkey, 23 - 27 August 2009, pp.133-0
- XIV. **Highly Selective Second-Order Band-pass Filter Design Using Minimum Number of Components**
SEDEF H.
International Conference on Circuits and Systems for Communications, 01 July 2006
- XV. **CDBA Gerçeklemesi ve Basamaklı Türden LC Devre Simülasyonu**
Ayten U. E., Sedef H.
ELECO 2004 Elektrik-Elektronik-Bilgisayar Mühendisliği Sempozyumu, Bursa, Turkey, 8 - 12 December 2004
- XVI. **CDBA Gerçeklemesi ve Basamaklı Türden LC Devre Simülasyonu**
SEDEF H.
Elektrik-Elektronik-Bilgisayar Mühendisliği Sempozyumu, 01 April 2004
- XVII. **Flash Bellekli Mikrodenetleyici İle Düşük Maliyetli Otomasyon Sistemi Uygulaması**
SEDEF H.
Elektrik-Elektronik-Bilgisayar Mühendisliği 10. Ulusal Kongresi, 01 March 2003
- XVIII. **Bilgisayar ile Seri Haberleşen Mikrodenetleyici Kontrollü Gösterge**
SEDEF H., UZUN T., MUTLU B.
5. BİLGİSAYAR HABERLEŞME SEMPOZYUMU, Bursa, Turkey, 18 - 21 November 1998, pp.30-33
- XIX. **Bilgisayar ile Seri Haberleşen Mikrodenetleyici Kontrollü Gösterge**
SEDEF H.
5. Bilgisayar-Haberleşme Sempozyumu, 01 August 1998
- XX. **Enerji Sistemlerinde Meydana Gelen Harmoniklerin Bir Mikrodenetleyici Kullanılarak İşlenmesi**
SEDEF H., ATTAR F., UZUN T.
Elektrik Mühendisliği 6. Ulusal Kongresi, Turkey, 18 - 22 September 1995, vol.1, pp.806-809
- XXI. **Enerji Sistemlerinde Meydana Gelen Harmoniklerin Bir Mikrodenetleyici Kullanılarak İşlenmesi**
SEDEF H.

- Elektrik Mühendisliği 6. Ulusal Kongresi, 01 May 1995
- XXII. **İkinci Kuşak Akım Taşıyıcıları (CCII) Kullanarak Basamaklı Türden LC Devrelerinin Simülasyonu**
SEDEF H.
Elektrik Mühendisliği 6. Ulusal Kongresi, 01 May 1995
- XXIII. **İleri Mikrogenetleyicili Eğitim Seti Tasarım ve Uygulamaları**
SEDEF H., UZUN T., ALSAN S.
Elektrik Mühendisliği 4. Ulusal Kongresi, İzmir, Turkey, 16 - 22 September 1991, pp.802-805
- XXIV. **Mikrogenetleyicili Temelli Devreler ile Frekans ve Peryot Ölçümü**
UZUN T., SEDEF H., ALBAYRAK R., ALSAN S.
Elektrik Mühendisliği 4. Ulusal Kongresi, İzmir, Turkey, 16 - 22 September 1991
- XXV. **İleri Mikrogenetleyicili Eğitim Seti Tasarım ve Uygulamaları**
SEDEF H.
Elektrik Mühendisliği 4. Ulusal Kongresi, 01 January 1991
- XXVI. **Mikrogenetleyicili Temelli Devreler ile Frekans ve Peryot Ölçümü**
SEDEF H.
Elektrik Mühendisliği 4. Ulusal Kongresi, 01 January 1991

Supported Projects

Kızılay A., Türk A. S., Sedef H., TÜBİTAK International Bilateral Joint Cooperation Program Project, Millimeter Wave Short Range Active and Passive Sensors for Intelligent Alarm Systems, 2015 - 2017

Metrics

Publication: 55
Citation (WoS): 421
Citation (Scopus): 495
H-Index (WoS): 12
H-Index (Scopus): 11

Non Academic Experience

Yücel Elektronik A. Ş.