

Lect. PhD FATİH MEHMET AVCU

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: ABG-8390-2020

ScopusID: 8964614300

Yoksis Researcher ID: 120289

Education Information

Post Doctorate, University of Virginia, Chemistry, United States Of America 2015 - 2016

Doctorate, Inonu University, Fen Bilimleri Enstitüsü, Chemistry, Turkey 2008 - 2013

Postgraduate, Firat University, Institute of Science , Chemistry, Turkey 2003 - 2005

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Resolution and Interpreting of Spectroscopic Signals of Complex Mixtures with The Parallel Genetic Algorithms, Inonu University, Fen Bilimleri Enstitüsü, 2012

Postgraduate, Magnetic interactions in supra molecular nickel systems , Firat University, Institute Of Science, 2005

Research Areas

Parallel Algorithms, Analytical Chemistry, Chemometry, Spectroscopical Methods

Academic Titles / Tasks

Lecturer PhD, Inonu University, Güzel Sanatlar Ve Tasarım Fakültesi, Müzik, 2007 - Continues

Instructor, Inonu University, Enformatik Bölümü, Enformatik Bölümü, 2001 - 2007

Academic and Administrative Experience

Head of Department, Inonu University, 2017 - 2019

Courses

Makine Öğrenmesi, Undergraduate, 2023-2024
Arduino ile Programlama, Undergraduate, 2023-2024
Tez Çalışması, Undergraduate Double Major, 2023-2024
Mesleki Yabancı Dil, Undergraduate, 2023-2024
Uzmanlık Alanı, Undergraduate Double Major, 2023-2024
Temel Bilgi Teknolojileri-I, Undergraduate, 2019-2020
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2019-2020
Robotik ve Programlama, Undergraduate, 2019-2020
Programlama, Undergraduate, 2019-2020
Temel Bilgi Teknolojileri-I, Undergraduate, 2019-2020
Robotik ve Programlama, Undergraduate, 2018-2019
Programlama, Undergraduate, 2018-2019
Mesleki Yabancı Dil 1-2, Undergraduate, 2018-2019
Elektronik Bilgisi, Undergraduate, 2018-2019
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2018-2019
ALGORITMA GELİSTİRME VE BILGISAYAR PROGRAMLAMA, Undergraduate Double Major, 2018-2019
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2017-2018
ALGORITMA GELİSTİRME VE BILGISAYAR PROGRAMLAMA, Undergraduate Double Major, 2017-2018
Robotik ve Programlama, Undergraduate, 2017-2018
Elektronik Bilgisi, Undergraduate, 2017-2018
Mesleki Yabancı Dil 1-2, Undergraduate, 2017-2018
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2016-2017
Elektronik Bilgisi, Undergraduate, 2016-2017
Elektronik Bilgisi, Undergraduate, 2015-2016
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2015-2016
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2014-2015
Elektronik Bilgisi, Undergraduate, 2014-2015
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2013-2014
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2012-2013
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Programlama, Undergraduate, 2009-2010
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2009-2010
Programlama, Undergraduate, 2008-2009
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2008-2009
Programlama, Undergraduate, 2007-2008
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2007-2008
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2006-2007
Programlama, Undergraduate, 2006-2007
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2005-2006
Programlama, Undergraduate, 2005-2006
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2004-2005
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2003-2004
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2002-2003
Temel Bilgi Teknolojisi 1-2, Undergraduate, 2001-2002

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Clustering honey samples with unsupervised machine learning methods using FTIR data**
Avcu F. M.
ANAIŞ DA ACADEMIA BRASILEIRA DE CIENCIAS, vol.96, no.1, pp.1-12, 2024 (SCI-Expanded)
- II. **Classification of some chemical drugs by genetic algorithm and deep neural network hybrid method**
Karakaplan M., Avcu F. M.
CONCURRENCY AND COMPUTATION-PRACTICE & EXPERIENCE, vol.33, no.13, 2021 (SCI-Expanded)
- III. **Deconvolution of Gaussian peaks with mixed real and discrete-integer optimization based on evolutionary computing**
KARAKAPLAN M., AVCU F. M.
JOURNAL OF CHEMOMETRICS, vol.34, no.6, 2020 (SCI-Expanded)
- IV. **A parallel and non-parallel genetic algorithm for deconvolution of NMR spectra peaks**
Karakaplan M., AVCU F. M.
CHEMOMETRICS AND INTELLIGENT LABORATORY SYSTEMS, vol.125, pp.147-152, 2013 (SCI-Expanded)
- V. **Sizeable amount of antiferromagnetic exchange interactions in newly reported dimeric cobalt (II) complex of the antiprine Schiff base of 3-formylsalicylic acid**
AVCU F. M., AYTEKIN O., KARAKAPLAN M., BAYRI A.
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.10, no.3, pp.589-591, 2008 (SCI-Expanded)
- VI. **Surprising magnetic behavior of cobalt(II) ion in recently prepared macrocycle complexes. Distortion versus intermolecular antiferromagnetic exchange interactions**
Bayri A., Bahadır A. R., Avcu F. M., AYTEKIN O.
TRANSITION METAL CHEMISTRY, vol.30, no.8, pp.987-991, 2005 (SCI-Expanded)

Articles Published in Other Journals

- I. **AZ VERİ SETLİ ÇALIŞMALARINDA DERİN ÖĞRENME VE DİĞER SINIFLANDIRMA ALGORİTMALARININ KARŞILAŞTIRILMASI: AGONİŞT VE ANTAGONİŞT LİGAND ÖRNEĐİ**
AVCU F. M.
İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksek Okulu Dergisi, vol.10, no.1, pp.356-371, 2022 (Peer-Reviewed Journal)
- II. **A Probabilistic Atomic Radius Definition: Application to Ground State Hydrogen-Like Atoms**
AVCU F. M., ALAGÖZ S.
Adıyaman University Journal of Science, 2020 (Peer-Reviewed Journal)
- III. **Finding exact number of peaks in broadband UV-vis spectra using curve fitting method based on evolutionary computing**
AVCU F. M., KARAKAPLAN M.
Journal of the Turkish Chemical Society, Section A: Chemistry, vol.7, no.1, pp.117-124, 2020 (Scopus)

Books & Book Chapters

- I. **Makine Öğrenmesinin Analitik Kimyada Yeni Bir Paradigma Olarak Yükseliş: İnceleme ve Geleceğ Yönelik Perspektifler**
Avcu F. M.
in: Doğa ve Mühendislik Bilimlerinde Güncel Tartışmalar 8, Hikmet Y. ÇOĞUN, İshak PARLAR, Hasan ÜZMUŞ, Editor, Bilgin Kültür Sanat Yayınları, Ankara, pp.749-772, 2023

Refereed Congress / Symposium Publications in Proceedings

- I. **Classification of Water Samples with Supervised Machine Learning**

Avcu F. M.

Uluslararası Dumlupınar Fen ve Matematik Kongresi - IDUSMAC 2022, Kütahya, Turkey, 5 - 07 September 2022, pp.217-218

II. Clustering Stinging Nettle Samples with Unsupervised Learning Methods & Testing the Method with Deep Learning

Avcu F. M., Karakaplan M., Mutlu B.

Uluslararası Dumlupınar Fen ve Matematik Kongresi - IDUSMAC 2022, Kütahya, Turkey, 5 - 07 September 2022, pp.133-134

III. AN OPTIMIZED FRAMEWORK FOR CHEMICAL MEDICINE CLASSIFICATION USING DEEP LEARNING COUPLED WITH GENETIC ALGORITHM

KARAKAPLAN M., AVCU F. M.

INTERNATIONAL MULTIDISCIPLINARY SYMPOSIUM ON DRUG RESEARCH & DEVELOPMENT, Malatya, Turkey, 1 - 03 June 2019, pp.311-312

IV. Hidden Genes Genetic Algorithms for Gaussian Functions

KARAKAPLAN M., AVCU F. M.

Fourth International Conference on New Trends in Chemometrics and Applications, Aydın, Turkey, 1 May - 03 June 2019, pp.14-15

V. Ses Üretimi Açısından Keman Çalgısında Köprü Üzerinde Bir Transformasyon Çalışm

AKBUDAK H., ARAPGİRLİÖĞLU H., AVCU F. M.

INTERNATIONAL EUROPEAN CONFERENCE ON SCIENCE, ART&CULTURE(ECSAC), Antalya, Turkey, 19 - 22 April 2018, pp.204

VI. Chemometrical Evaluation of Complex Analytic Signals by Parallel Genetic Algorithm Microwave Spectra Examples

AVCU F. M., KARAKAPLAN M.

Third International Conference on New Trends in Chemometrics and Applications, 25 - 28 May 2016

VII. Resolution of overlapping UV Vis absorption bands with parallel genetic algorithm

Avcu F. M., Karakaplan M.

Second International Conference on New Trends in Chemometrics and Applications, Ankara, Turkey, 01 May 2013

VIII. Paralel Genetik Algoritma İle Çok Merkezli Fonksiyonların Optimizasyonu

Avcu F. M.

3. Ulusal Yüksek Başarımlı Hesaplama Konferansı, Ankara, Turkey, 12 March 2012, pp.4-8

Supported Projects

KARAKAPLAN M., AVCU F. M., Project Supported by Higher Education Institutions, Genetik Algoritma ile Spektral Verilerin Ayrıştırılması ve Sonuçların Nitel ve Nicel Olarak İncelenmesi, 2019 - 2021

KARABURUN DOĞAN D., AKBUDAK H., ADIGÜZEL A., ÜRÜN T., GİRAY M. Z., DAĞDEVİREN M., AVCU F. M., SAYAN Ş., ÇAKI C., AKGÜN E., et al., Project Supported by Higher Education Institutions, Antakya Süryani Ortodoks Kilisesi Dinsel Müzik Uygulamalarının Bölge Kültürüne Etkisi, 2018 - 2020

Avcu F. M., TUBITAK Project, Chemometric evaluation of microwave spectrum data with parallel genetic algorithm and developing methods for overlap peak analysis., 2015 - 2016

Avcu F. M., Project Supported by Higher Education Institutions, Doğal ve Yapay Malzeme Karışımlarından Biyo Chip Nano Mikro Kapiler Sistem Üretimi, 2012 - 2016

Avcu F. M., Project Supported by Higher Education Institutions, Bilgisayar Alt Yapısı Güncelleme, 2013 - 2013

Avcu F. M., Project Supported by Higher Education Institutions, Kompleks Karışımların Spektroskopik Sinyallerinin Paralel, 2010 - 2012

Activities in Scientific Journals

Journal of the Turkish Chemical Society Section A: Chemistry, Committee Member, 2024 - Continues
İnönü Üniversitesi Sanat ve Tasarım Dergisi, Committee Member, 2018 - Continues

Memberships / Tasks in Scientific Organizations

Turkish Chemical Society, Member, 2021 - Continues, Turkey

Scientific Refereeing

Journal of the Turkish Chemical Society Section A: Chemistry, Other Indexed Journal, December 2022

Journal of the Turkish Chemical Society Section A: Chemistry, Other Indexed Journal, March 2022

Adiyaman University Journal of Science, Other Indexed Journal, October 2021

Turkish Computational and Theoretical Chemistry , Other Indexed Journal, September 2020

Turkish Computational and Theoretical Chemistry, Other Indexed Journal, June 2020

Journal of the Turkish Chemical Society Section A: Chemistry, Other Indexed Journal, April 2020

Metrics

Publication: 20

Citation (WoS): 24

Citation (Scopus): 16

H-Index (WoS): 3

H-Index (Scopus): 2

Congress and Symposium Activities

3rd International Conference on New Trends in Chemometrics and Applications, Attendee, Antalya, Turkey, 2015

2nd International Conference on New Trends in Chemometrics and Applications, Attendee, Ankara, Turkey, 2013

Scholarships

2219, TUBITAK, 2015 - 2016

Non Academic Experience

University of Virginia