

## Assoc. Prof. MEHMET CEM ÇATALBAŞ

### Personal Information

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### International Researcher IDs

ORCID: 0000-0002-9291-1180

Publons / Web Of Science ResearcherID: E-3629-2016

ScopusID: 55807863600

Yoksis Researcher ID: 137501

### Education Information

Doctorate, Firat University, Institute Of Science, Elektrik-Elektronik Mühendisliği (Dr), Turkey 2014 - 2018

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (YI) (Tezli), Turkey 2011 - 2014

Undergraduate, Firat University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 2005 - 2009

### Dissertations

Doctorate, Balon balığı davranışı tabanlı yeni bir metasezgisel optimizasyon algoritması, Firat University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), 2018

Postgraduate, Temel bileşenler analizi ve kanonik korelasyon analizi ile imge tanıma ve sınıflandırma, Hacettepe University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (YI) (Tezli), 2014

### Research Areas

Computer Sciences, Biomedical Engineering, Electrical and Electronics Engineering, Mathematics, Statistics, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Ankara University, 1. Organize Sanayi Bölgesi Meslek Yüksekokulu, Elektronik ve Otomasyon Bölümü, 2021 - Continues

Assistant Professor, Ostim Technical University, Vocational School, Department Of Electronics And Automation, 2019 - 2021

Research Assistant, Firat University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 2014 - 2018

Research Assistant, Hacettepe University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2011 - 2014

### Academic and Administrative Experience

Director of Vocational School, Ankara University, 1. Organize Sanayi Bölgesi Meslek Yüksekokulu, 2023 - Continues  
Head of Department, Ankara University, 1. Organize Sanayi Bölgesi Meslek Yüksekokulu, Elektronik ve Otomasyon  
Bölümü, 2021 - Continues

Assistant Director of Vocational School, Ostim Technical University, Vocational School, Department Of Electronics And  
Automation, 2020 - 2021

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Examining Factors Influencing Cognitive Load of Computer Programmers**  
Issever D., ÇATALBAŞ M. C., DURAN F.  
Brain Sciences, vol.13, no.8, 2023 (SCI-Expanded)
- II. **Dynamic speaker localization based on a novel lightweight R-CNN model**  
ÇATALBAŞ M. C., Dobrisek S.  
Neural Computing and Applications, vol.35, no.14, pp.10589-10603, 2023 (SCI-Expanded)
- III. **Measurement of correlated color temperature from RGB images by deep regression model**  
ÇATALBAŞ M. C., Kobav M. B.  
MEASUREMENT, vol.195, 2022 (SCI-Expanded)
- IV. **Modified VDSR-based single image super-resolution using naturalness image quality evaluator**  
ÇATALBAŞ M. C.  
SIGNAL IMAGE AND VIDEO PROCESSING, vol.16, no.3, pp.661-668, 2022 (SCI-Expanded)
- V. **The mathematical relationship between COVID-19 cases and socio-economic indicators of OECD countries**  
ÇATALBAŞ M. C., Burken S.  
PATHOGENS AND GLOBAL HEALTH, vol.116, no.6, pp.376-388, 2022 (SCI-Expanded)
- VI. **Analysis of photovoltaic-green roofs in OSTIM industrial zone**  
ÇATALBAŞ M. C., Kocak B., Yenipinar B.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.46, no.28, pp.14844-14856, 2021 (SCI-Expanded)
- VII. **Chaotic Systems Based Real-Time Implementation of Visual Cryptography Using LabVIEW**  
Bulut G. G., ÇATALBAŞ M. C., GÜLER H.  
TRAITEMENT DU SIGNAL, vol.37, no.4, pp.639-645, 2020 (SCI-Expanded)
- VIII. **Unsupervised Multi-Label Image and Texture Segmentation based on Optimal Feature Representation**  
ÇATALBAŞ M. C.  
TEHNICKI VJESNIK-TECHNICAL GAZETTE, vol.26, no.5, pp.1275-1283, 2019 (SCI-Expanded)
- IX. **Passive thermal management of an OLED TV display**  
Nil M., ÖZTÜRK Y., AKGÜL M. B., ÇATALBAŞ M. C., NİL M.  
OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS, vol.12, no.7-8, pp.401-406, 2018 (SCI-Expanded)
- X. **A novel super resolution approach for computed tomography images by inverse distance weighting method**  
ÇATALBAŞ M. C., GÜLTEN A.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.33, no.2, pp.671-684, 2018 (SCI-Expanded)
- XI. **3D Moving Sound Source Localization via Conventional Microphones**  
ÇATALBAŞ M. C., Dobrisek S.  
ELEKTRONIKA IR ELEKTROTEHNIKA, vol.23, no.4, pp.63-69, 2017 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Impacts of COVID-19 Pandemic on Electrical Energy Storage Technologies**  
ÇATALBAŞ M. C.  
Energy Storage, 2021 (ESCI)
- II. **Envanter Yönetimi için Düşük Maliyetli UHF RFID Sistemin Tasarımı ve Gerçekleştirilmesi**  
ÇATALBAŞ M. C., SEVGİ A.  
El-Cezeri Fen ve Mühendislik Dergisi, vol.8, no.3, pp.1416-1428, 2021 (Scopus)
- III. **Design and Implementation of a Three-Wheel Multi-Purpose Electric Vehicle with Finite Elements Analysis**  
ALVALI G. T., BALBAY A., GÜNEŞ S., YENİPİNAR B., ÇATALBAŞ M. C., ŞİŞMAN T.  
International Journal of Automotive Science and Technology, vol.5, no.2, pp.116-125, 2021 (Peer-Reviewed Journal)
- IV. **An Investigation into the Relationship between Curse of Dimensionality and Dunning-Kruger Effect**  
ÇATALBAŞ M. C.  
Sakarya University Journal of Computer and Information Sciences, vol.3, no.2, pp.121-130, 2020 (Peer-Reviewed Journal)
- V. **Design and Implementation of a Hysteresis Band Current Controller Three-Phase AC Chopper System**  
ÇATALBAŞ N., ÇATALBAŞ M. C., SÜNTER S.  
INTERNATIONAL JOURNAL OF RENEWABLE ENERGY RESEARCH, vol.10, no.2, pp.625-632, 2020 (ESCI)
- VI. **A NOVEL APPROACH FOR OPTIMIZATION OF NOZZLE ANGLE AND THRUST VECTORING CONTROLLER VIA A SUB-MUTATION GENETIC ALGORITHM**  
ÇATALBAŞ M. C., GÜLTEN A.  
INTERNATIONAL JOURNAL OF INNOVATIVE COMPUTING INFORMATION AND CONTROL, vol.13, no.6, pp.1929-1940, 2017 (ESCI)
- VII. **ENVIRONMENT ADAPTIVE LIGHTING SYSTEMS FOR SMART HOMES**  
ÇATALBAŞ M. C.  
ADVANCES IN SCIENCE AND TECHNOLOGY-RESEARCH JOURNAL, vol.11, no.3, pp.172-178, 2017 (ESCI)
- VIII. **Design and Implementation of Software Based Audiometer System**  
ÇATALBAŞ M. C., GÜLER H.  
Journal of Image and Graphics, vol.5, no.1, pp.29-33, 2017 (Scopus)
- IX. **Computation of the Speed of Four In-Wheel Motors of an Electric Vehicle Using a Radial Basis Neural Network**  
YILDIRIM M., ÇATALBAŞ M. C., GÜLTEN A., KÜRÜM H.  
ENGINEERING TECHNOLOGY & APPLIED SCIENCE RESEARCH, vol.6, no.6, pp.1288-1293, 2016 (ESCI)
- X. **Estimation of Trajectory and Location for Mobile Sound Source**  
ÇATALBAŞ M. C., YILDIRIM M., GÜLTEN A., KÜRÜM H., Dobrisek S.  
INTERNATIONAL JOURNAL OF ADVANCED COMPUTER SCIENCE AND APPLICATIONS, vol.7, no.9, pp.237-241, 2016 (ESCI)
- XI. **Ortam Gürültü Seviyesi Uyarlamalı ve Mikro Denetleyici Destekli Saf Ton Odyometre Gerçekleştirilmesi**  
ÇATALBAŞ M. C., GÜLER H., GÜLTEN A.  
Fırat Üniversitesi Mühendislik Bilimleri Dergisi, vol.28, no.2, pp.43-49, 2016 (Peer-Reviewed Journal)
- XII. **Hava Taşıtlarının Uçuş Kontrolü için Doğrusal Kuadratik Regülatör Yöntemi ile Optimal Kontrolör Tasarımı**  
ÇATALBAŞ M. C., URAL BAYRAK Z., GÜLTEN A.  
FIRAT ÜNİVERSİTESİ MÜHENDİSLİK BİLİMLERİ DERGİSİ, vol.27, no.2, 2015 (Peer-Reviewed Journal)

## Books

**I. Pufferfish Optimization Algorithm: A Bio-Inspired Optimizer**

ÇATALBAŞ M. C., GÜLTEN A.

in: Handbook of Intelligent Computing and Optimization for Sustainable Development, , Editor, John Wiley & Sons Incorporated, New Jersey, pp.463-485, 2021

**Papers Published in Refereed Scientific Meetings**

**I. A framework of Multi-Point Infrared Temperature Screening System for COVID-19 Pandemic**

ÇATALBAŞ M. C.

4.International Symposium on Advanced Electrical and Communication Technologies (ISAECT), 06 December 2021

**II. Prototype of low-cost portable ventilator system for COVID-19**

ÇATALBAŞ M. C.

XIIIth National Medical Physics and Biomedical Engineering Conference 2020, Plovdiv, Bulgaria, 1 - 04 November 2020

**III. Wave Energy Converter Technology and an Analysis of its Potential in Turkey**

ÇATALBAŞ N., ÇATALBAŞ M. C.

6th International Conference on Electrical Engineering, ICEE 2020, Virtual, Istanbul, Turkey, 25 - 27 September 2020

**IV. Is there a relationship between self-confidence and time to reach data on brain?**

ÇATALBAŞ M. C.

7th International Symposium on Brain and Cognitive Science, 31 May 2020

**V. The impressive circular structures on the seabed as nature-inspired optimization**

ÇATALBAŞ M. C., GÜLTEN A.

XIII Balkan Conference on Operational Research, Belgrade, Serbia, 25 - 28 May 2018, pp.22

**VI. Circular Structures of Puffer Fish: A New Metaheuristic Optimization Algorithm**

ÇATALBAŞ M. C., GÜLTEN A.

3rd International Conference on Electrical and Biomedical Engineering, Clean Energy and Green Computing (EBECEGC), Beirut, Lebanon, 25 - 27 April 2018, pp.1-5

**VII. An Audio Dataset for the Development of Automatic Spatial Localisation, Separation and Recognition of Speakers**

Dobrisek S., ÇATALBAŞ M. C., David C.

26th International Electrotechnical and Computer Science Conference IEEE ERK 2017, At Portorož, Slovenia, Portoroz, Slovenia, 25 - 27 September 2017

**VIII. Estimation of Optimal Locations for Electric Vehicle Charging Stations**

ÇATALBAŞ M. C., YILDIRIM M., GÜLTEN A., KÜRÜM H.

17th IEEE International Conference on Environment and Electrical Engineering (IEEE EEEIC) / 1st IEEE Industrial and Commercial Power Systems Europe Conference (IEEE I and CPS Europe), Milan, Italy, 6 - 09 June 2017

**IX. Driver Fatigue Detection Based on Saccadic Eye Movements**

ÇATALBAŞ M. C., Cegovnik T., Sodnik J., GÜLTEN A.

10th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 30 November - 02 December 2017, pp.913-917

**X. Optimal Component Selection for Image Segmentation via Parallel Analysis**

Catalbas M. C., YILDIRIM M., GÜLTEN A., KÜRÜM H.

8th IEEE International Conference on Intelligent Systems (IS), Sofija, Bulgaria, 4 - 06 September 2016, pp.499-502

**XI. Modelling and Estimation Parameters of Electronic Differential System for an Electric Vehicle using Radial Basis Neural Network**

YILDIRIM M., ÇATALBAŞ M. C., GÜLTEN A., KÜRÜM H.

IEEE 16th International Conference on Environment and Electrical Engineering (EEEIC), Florence, Italy, 6 - 10 June 2016

**XII. Computer Based Audiometer Design In LabVIEW**

ÇATALBAŞ M. C., GÜLER H.

INTERNATIONAL CONGRESS ON NATURAL AND ENGINEERING SCIENCES, 9 - 13 September 2015

- XIII. **Graphical User Interface GUI for Automatic Image Alignment and Corner Detection on the Prokudin Gorskii photo collection**  
ÇATALBAŞ M. C., DİDEM İ., GÜLTEN A.  
ISTEC 2015 International Science and Technology Conference, 2 - 04 September 2015
- XIV. **Gender Based Image Classification via Canonical Correlation Analysis**  
ÇATALBAŞ M. C., ÖZKAZANÇ Y. S., GÜLTEN A.  
3RD INTERNATIONAL SYMPOSIUM ON INNOVATIVE TECHNOLOGIES IN ENGINEERING AND SCIENCE, Valensiya, 3 - 05 June 2015
- XV. **Automatic Determination of Neovascularization Area with Adaptive Histogram Equalization**  
ÇATALBAŞ M. C., Issever D., GÜLTEN A.  
Medical Technologies National Conference (TIPTEKNO), Bodrum, Turkey, 15 - 18 October 2015
- XVI. **Morphological Feature Extraction with Local Histogram Equalization**  
Catalbas M. C., Issever D., GÜLTEN A.  
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.435-438
- XVII. **Çevrimiçi İmza Tanıma Online Signature Recognition**  
TOKER K. G., KÜÇÜK S., ÇATALBAŞ M. C.  
2014 IEEE 22nd Signal Processing and Communications Applications Conference (SIU 2014), Turkey, 23 - 25 April 2014
- XVIII. **Çoklu Kanonik Korelasyon Analizi ile İmge Sınıflandırma Image Classification via Multi Canonical Correlation Analysi**  
ÇATALBAŞ M. C., ÖZKAZANÇ Y. S.  
2014 IEEE 22nd Signal Processing and Communications Applications Conference (SIU 2014), Turkey, 23 - 25 April 2014
- XIX. **Temel Bileşenler Analizi ile Radyo Astronomi İmgelerinden Gürültünün Ayırıştırılması**  
ÇATALBAŞ M. C., DİDEM İ., GÜLTEN A.  
URSI-TÜRKİYE'2014VII. Bilimsel Kongresi, 28-30 Ağustos 2014, ELAZIĞ, Turkey, 28 - 30 August 2014
- XX. **Online Signature Recognition**  
Toker K. G., KÜÇÜK S., Catalbas M. C.  
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1754-1757
- XXI. **IMAGE CLASSIFICATION VIA MULTI CANONICAL CORRELATION ANALYSIS**  
Catalbas M. C., Ozkazanc Y.  
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1011-1014
- XXII. **COUNTRY OF ORIGIN ESTIMATION FROM COMPOSITE FACES USING KERNEL PRINCIPAL COMPENENT ANALYSIS**  
Catalbas M. C., YÜKSEKKAYA B.  
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1207-1210
- XXIII. **Borsa Endeksleri Arasındaki İlişkinin Kanonik Korelasyon Analizi ile İncelenmesi**  
ÇATALBAŞ M. C.  
8. Uluslararası İstatistik Kongresi, 27 - 30 October 2013
- XXIV. **Radyal Tabanlı Sinir Ağları ile Süper Çözünürlük Super Resolution using Radial Basis Neural Networks**  
ÇATALBAŞ M. C., ÖZTÜRK S.  
21. Sinyal İşleme ve İletişim Uygulamaları Kurultayı IEEE SIU, Turkey, 24 - 26 April 2013
- XXV. **SUPER RESOLUTION USING RADIAL BASIS NEURAL NETWORKS**  
ÇATALBAŞ M. C., Ozturk S.

## Supported Projects

ÇATALBAŞ M. C., Project Supported by Higher Education Institutions, COVID-19 İçin Düşük Maliyetli İnvaziv Olmayan Ventilatör Tasarımı ve Uygulaması, 2020 - Continues

ÇATALBAŞ M. C., Project Supported by Higher Education Institutions, Envanter Yönetimi için Düşük Maliyetli ve Esnek UHF RFID Sistem, 2020 - Continues

ÇATALBAŞ M. C., Project Supported by Other Official Institutions, Pil Tabanlı Fotovoltaik Sistemler Eğitim Tasarım ve Uygulaması Projesi, 2020 - Continues

Çatalbaş M. C., Arı F., Yüksekaya M., Fıçıcı C., Telatar Z., TUBITAK Project, Afet Sonrası Arama Kurtarma Operasyonlarında Hayatta Kalanları Tespit Etmek İçin Çoklu Sensör Veri Füzyonu Tabanlı Otonom İHA Sistemi Tasarımı ve Gerçekleştirilmesi, 2025 - 2026

Çatalbaş M. C., Other International Funding Programs, Enhanced Modular UGV for Post-Disaster Research, 2023 - 2025

ÇATALBAŞ M. C., Project Supported by Higher Education Institutions, Yeni Nesil Bir Elektrikli Arabanın Şasi Tasarımı ve İmalatı, 2020 - 2020

## Metrics

Publication: 50

Citation (WoS): 74

Citation (Scopus): 87

H-Index (WoS): 5

H-Index (Scopus): 5