

## Prof. İLYAS ÇANKAYA

### Personal Information

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### Education Information

Doctorate, The University of Sussex, Faculty of Engineering, Electrical, Electronics and Computer Engineering, United Kingdom 1994 - 1998

Undergraduate, Gazi University, Teknik Eğitim Fakültesi, Elektronik Ve Bilgisayar Eğitimi Bölümü, Turkey 1986 - 1990

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Investigation of Jump Phenomenon on Ship Roll Motion by Generalized Harmonic Balance Method, The University of Sussex, Faculty of Engineering, Electrical, Electronics and Computer, 1999

### Research Areas

Engineering and Technology

### Academic Titles / Tasks

Professor, Ankara Yıldırım Beyazıt University, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2017 - Continues

Associate Professor, Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2012 - 2017

Assistant Professor, Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2012 - 2012

Assistant Professor, Sakarya University, Faculty Of Technical Education, Department Of Electronics And Computer Education, 1999 - 2011

Research Assistant, Sakarya University, Faculty Of Technical Education, Department Of Electronics And Computer Education, 1993 - 1999

### Academic and Administrative Experience

Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik ve Doğa Bilimleri Fakültesi, 2018 - Continues

Yıldırım Beyazıt Üniversitesi, Fen Bilimleri Enstitüsü, 2012 - 2017

Sakarya Üniversitesi, Teknik Eğitim Fakültesi, Elektronik Ve Bilgisayar Eğitimi Bölümü, 1999 - 2011

Sakarya Üniversitesi, Teknik Eğitim Fakültesi, Elektronik Ve Bilgisayar Eğitimi Bölümü, 2006 - 2007

## Courses

EEM407-Bilgisayar Yazılım Uygulamaları, Undergraduate, 2016 - 2017

EEM401-Bitirme Projesi - I, Undergraduate, 2016 - 2017

EE401-RESEARCH PROJECT - I, Undergraduate, 2016 - 2017

EE407-Computer Software Applications, Undergraduate, 2016 - 2017

EE515-Numerical and Symbolic Computations (FBE), Postgraduate, 2016 - 2017

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

- I. **Optimal model-free approach based on mdl and chl for active brain identification in fmri data analysis**  
Jaber H. A. , ÇANKAYA İ., Aljobouri H. K. , Koçak O. M. , Algin O.  
Current Medical Imaging, vol.17, no.3, pp.352-365, 2021 (Journal Indexed in SCI Expanded)
- II. **Super-resolution algorithm applied to images acquired at millimeter wave frequency in single pixel and computational ghost imaging configurations**  
ŞENGÜN ERMEYDAN E., ÇANKAYA İ., ŞAHİN A. B.  
Journal of Electromagnetic Waves and Applications, vol.33, no.17, pp.2328-2340, 2019 (Journal Indexed in SCI Expanded)
- III. **Enhancing the image resolution in a single-pixel sub-THz imaging system based on compressed sensing**  
Alkus U., Ermeydan E., Sahin A. B. , Cankaya I., ALTAN H.  
Optical Engineering, vol.57, no.4, 2018 (Journal Indexed in SCI Expanded)
- IV. **Clustering fMRI data with a robust unsupervised learning algorithm for neuroscience data mining.**  
Aljobouri H. K. , Jaber H. A. , KOÇAK O. M. , Algin O., Cankaya I.  
Journal of neuroscience methods, vol.299, pp.45-54, 2018 (Journal Indexed in SCI Expanded)
- V. **Performance evaluation of prototype-based clustering algorithms combined MDL index**  
Aljobouri H. K. , Jaber H. A. , Cankaya I.  
Computer Applications in Engineering Education, vol.25, no.4, pp.642-654, 2017 (Journal Indexed in SCI Expanded)
- VI. **Investigaton of computational load and parallel computing of Volterra series method for frequency analysis of nonlinear systems**  
Kacar S., Cankaya İ., Boz A. F.  
Optoelectronics and Advanced Materials, Rapid Communications, vol.8, pp.555-566, 2014 (Journal Indexed in SCI Expanded)
- VII. **ANALYSIS OF NONLINEAR SYSTEMS USING MATLAB AND ASP.NET BASED WEB INTERFACE**  
KAÇAR S., ÇANKAYA İ.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.27, no.4, pp.795-806, 2012 (Journal Indexed in SCI)
- VIII. **Broken rotor bar fault detection in inverter-fed squirrel cage induction motors using stator current analysis and fuzzy logic**  
AKAR M., ÇANKAYA İ.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.20, pp.1077-1089, 2012 (Journal Indexed in SCI)
- IX. **Development of web based remote monitoring system for wireless sensor networks using MATLAB**

**WEB server MATLAB WEB sunucusu kullanılarak kablosuz algılayıcı ağlar için internet tabanlı izleme sistemi tasarımı**

Bayılmış C., Çakiroğlu M., Öztürk S. Ş., Çankaya İ.

Journal of the Faculty of Engineering and Architecture of Gazi University, vol.25, no.2, pp.371-379, 2010 (Journal Indexed in SCI Expanded)

- X. **Detection of static eccentricity for permanent magnet synchronous motors using the coherence analysis**  
Akar M., Taşkin S., Şeker S., Çankaya İ.  
Turkish Journal of Electrical Engineering and Computer Sciences, vol.18, no.6, pp.963-974, 2010 (Journal Indexed in SCI Expanded)
- XI. **Frequency response investigations of multi-input multi-output nonlinear systems using automated symbolic harmonic balance method**  
Akgün D., Çankaya İ.  
Nonlinear Dynamics, vol.61, no.4, pp.803-818, 2010 (Journal Indexed in SCI Expanded)
- XII. **Field experiments on wave propagation and vibration isolation by using wave barriers**  
Çelebi E., Firat S., Beyhan G., Çankaya İ., Vural I., Kirtel O.  
Soil Dynamics and Earthquake Engineering, vol.29, no.5, pp.824-833, 2009 (Journal Indexed in SCI Expanded)
- XIII. **A symbolic algorithm for the automatic computation of multitone-input harmonic balance equations for nonlinear systems**  
Akgün D., Çankaya İ., Peyton Jones J.  
Nonlinear Dynamics, vol.56, pp.179-191, 2009 (Journal Indexed in SCI Expanded)
- XIV. **Diagnosis of static eccentricity fault in permanent magnet synchronous motor by on-line monitoring of motor current and voltage**  
Akar M., Çankaya İ.  
Istanbul University - Journal of Electrical and Electronics Engineering, vol.9, no.2, pp.959-967, 2009 (Journal Indexed in SCI Expanded)
- XV. **The effectiveness of wave barriers on the dynamic stiffness coefficients of foundations using boundary element method**  
Çelebi E., Firat S., Çankaya İ.  
Applied Mathematics and Computation, vol.180, no.2, pp.683-699, 2006 (Journal Indexed in SCI Expanded)
- XVI. **Dynamic impedance functions for rectangular rigid foundations Dikdörtgen rijit temellerin dinamik empedans fonksiyonları**  
Çelebi E., Firat S., Çankaya İ.  
Teknik Dergi/Technical Journal of Turkish Chamber of Civil Engineers, vol.17, no.2, pp.3827-3849, 2006 (Journal Indexed in SCI Expanded)
- XVII. **The evaluation of impedance functions in the analysis of foundations vibrations using boundary element method**  
Çelebi E., Firat S., Çankaya İ.  
Applied Mathematics and Computation, vol.173, no.1, pp.636-667, 2006 (Journal Indexed in SCI Expanded)
- XVIII. **Polyharmonic Balance Analysis of Nonlinear Ship Roll Response**  
Jones J. P., Çankaya İ.  
Nonlinear Dynamics, vol.35, no.2, pp.123-146, 2004 (Journal Indexed in SCI Expanded)
- XIX. **A note on the computation of maximum roll amplitudes in regular beam seas**  
Peyton Jones J., Çankaya İ.  
Journal of Ship Research, vol.41, no.3, pp.224-229, 1997 (Journal Indexed in SCI Expanded)
- XX. **Symbolic computation of harmonic balance equations**  
Jones J. C. P., Zhuang M., Çankaya İ.  
International Journal of Control, vol.68, no.3, pp.449-460, 1997 (Journal Indexed in SCI Expanded)
- XXI. **Generalized harmonic analysis of nonlinear ship roll dynamics**  
Peyton Jones J., Çankaya İ.  
Journal of Ship Research, vol.40, no.4, pp.316-325, 1996 (Journal Indexed in SCI Expanded)

## Articles Published in Other Journals

- I. **Design a control system for observing vibration and temperature of turbines**  
Al-Hardanee O. F. , ÇANKAYA İ., Muhsen A. A. , CANBOLAT H.  
Indonesian Journal of Electrical Engineering and Computer Science, vol.24, no.3, pp.1437-1444, 2021 (Refereed Journals of Other Institutions)
- II. **Measurement, comparison and improvement of the performance of the graphics cards used in Ethereum mining**  
Kalkanci G., ÇANKAYA İ., Kizilbey O.  
International Journal of Scientific and Technology Research, vol.8, no.4, pp.300-303, 2019 (Refereed Journals of Other Institutions)
- III. **Robust ECG data compression method based on  $\epsilon$ -insensitive Huber loss function**  
KARAL Ö., ÇANKAYA İ.  
Sakarya University Journal of Science, vol.22, no.4, pp.1142-1151, 2018 (Other Refereed National Journals)
- IV. **Gradyan Anahtarlamalı Gauss Görüntü Filtresi**  
DEĞİRMENCİ A., ÇANKAYA İ., DEMİRCİ R.  
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.6, no.1, pp.196-215, 2018 (Other Refereed National Journals)
- V. **Design and Implementation of High Voltage Generator for Medical Applications**  
Jaber H., Aljobouri H., KIVRAK S., ÇANKAYA İ.  
International Journal on Science and Engineering Investigations, vol.6, no.60, pp.118-122, 2017 (Refereed Journals of Other Institutions)
- VI. **A HEART RATE MONITORING APPLICATION USING WIRELESS SENSOR NETWORK SYSTEM BASED ON BLUETOOTH WITH MATLAB GUI**  
UYSAL Z., KALKANCI G., İMREN T., DEĞİRMENCİ A., KARAL Ö., ÇANKAYA İ.  
International Journal of Engineering Science and Computing, vol.6, no.9, pp.2862-2866, 2016 (Refereed Journals of Other Institutions)
- VII. **A Heart Rate Monitoring Application Using Wireless Sensor Network System Based on Bluetooth With Matlab GUI**  
UYSAL Z., KALKANCI G., TUĞÇE İ., DEĞİRMENCİ A., KARAL Ö., ÇANKAYA İ.  
International Journal of Engineering Science and Computing, vol.6, no.8, pp.2862-2166, 2016 (Refereed Journals of Other Institutions)
- VIII. **A Study on Clustering Based Image Tresholding Techniques With MATLAB GUI**  
ŞAHAN Ş., DEĞİRMENCİ A., ÇANKAYA İ.  
International Journal of Engineering Science and Computing, vol.6, no.8, pp.2152-2160, 2016 (Refereed Journals of Other Institutions)
- IX. **A Study on Clustering Based Image Thresholding Techniques with MATLAB GUI**  
ŞAHAN Ş., DEĞİRMENCİ A., ÇANKAYA İ.  
International Journal of Engineering Science and Computing, vol.6, no.8, pp.2152-2160, 2016 (Refereed Journals of Other Institutions)
- X. **Design Graphical User Interface of Linear Algebra System Package by Using MATLAB**  
Alziarjawey H., ÇAMDALI Ü., ÇANKAYA İ., ALJOBOURI H.  
International Journal on Recent and Innovation Trends in Computing and Communication, vol.4, no.6, pp.428-433, 2016 (Refereed Journals of Other Institutions)
- XI. **Design Graphical User Interface of Linear Algebra System Package by Using**  
Alziarjawey H., ÇAMDALI Ü., ÇANKAYA İ., Aljobouri H.  
International Journal on Recent and Innovation Trends in Computing and Communication, 2016 (Refereed Journals of Other Institutions)
- XII. **Heart Rate Monitoring and PQRST Detection Based on Graphical User Interface with Matlab**  
Hussain A., ÇANKAYA İ.  
International Journal of Information and Electronics Engineering, vol.5, no.4, pp.311-316, 2015 (Refereed Journals of Other Institutions)

- XIII. **From biomedical signal processing techniques to fmri parcellation**  
AL-Jobouri H. K. , Cankaya İ., Karal Ö.  
Biosciences Biotechnology Research Asia, vol.12, no.2, pp.1115-1138, 2015 (Refereed Journals of Other Institutions)
- XIV. **Design Of Asp. Net Based Web Interface With Matlab Builder Ne And Matlab Webfigure For Wireless Sensor Networks**  
KAÇAR S., BAYILMIŞ C., ÇANKAYA İ., Çakıroğlu M.  
Technological Applied Sciences, vol.4, no.4, pp.360-370, 2009 (Refereed Journals of Other Institutions)
- XV. **Dikdörtgen Rijit Temellerin Dinamik Empedans Fonksiyonları**  
ÇELEBİ E., FIRAT S., ÇANKAYA İ.  
Teknik Dergi, vol.17, no.2, pp.3827-3849, 2006 (Other Refereed National Journals)
- XVI. **Effect of a constant heeling moment on the main and superharmonic roll response of a ship in regular beam seas**  
Peyton Jones J., Çankaya İ.  
International Shipbuilding Progress, vol.46, no.446, pp.165-187, 1999 (Refereed Journals of Other Institutions)

### **Books & Book Chapters**

- I. **Performance Assessment of Unsupervised Clustering Algorithms Combined MDL Index**  
Aljobouri H., Jaber H., ÇANKAYA İ.  
in: Recent Applications in Data Clustering, Harun Pirim, Editor, IntechOpen Limited, London, pp.175-194, 2018
- II. **Mühendislik Uygulamaları İçin MATLAB**  
ÇANKAYA İ., AKGÜN D., KAÇAR S.  
Seçkin Yayıncılık San. ve Tic. A.Ş., Ankara, 2016
- III. **Mühendislik Uygulamaların İçin MATLAB**  
ÇANKAYA İ., AKGÜN D., KAÇAR S.  
Seçkin Yayıncılık San. Ve Tic. A.Ş., Ankara, 2015

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **Designing a System for Natural Gas Storage Facilities in Salt Caverns**  
Orhan E. M. , ÇANKAYA İ.  
International Conference on Engineering Technologies (ICENTE'19), Konya, Turkey, 25 - 27 October 2019, pp.169-176
- II. **Doğrusal Olmayan Sistemlerin Frekans Cevabının Elde Edilmesi İçin Volterra Serileri Temelli Tanımlama Fonksiyonlarının Kullanılması**  
KAÇAR S., Güteryüz E., AKGÜN D., ÇANKAYA İ., BAYILMIŞ C.  
Zeugma II. Uluslararası Multi Disipliner Çalışmalar Kongresi, Gaziantep, Turkey, 18 - 20 January 2019, vol.3, pp.1616-1627
- III. **Doğrusal Olmayan Sistemlerin Frekans Cevabının Elde Edilmesi İçin Analog Devre Tasarımı**  
KAÇAR S., Güteryüz E., AKGÜN D., ÇANKAYA İ., BAYILMIŞ C.  
Zeugma II. Uluslararası Multi Disipliner Çalışmalar Kongresi, Gaziantep, Turkey, 18 - 20 January 2019, vol.3, pp.1606-1615
- IV. **A Solution to the Local Minima Problem of the Chan-Vese Algorithm for Image Segmentation**  
ÇATALOLUK H., ÇELEBİ F. V. , ÇANKAYA İ.  
3rd International Conference on Engineering Technology and Applied Sciences, ÜSKÜP, Macedonia, 17 - 21 July 2018, pp.97-100
- V. **New Approaches for Data Monitoring, Analysis and Management of Rooftop Based PV Power Plants**  
YILDIRIM R., ÇANKAYA İ., GÖKTAŞ F., YILDIZ A., YEŞİLATA B.

3rd International Conference on Engineering Technology and Applied Sciences, ÜSKÜP, Macedonia, 17 - 21 July 2018, pp.435-438

- VI. **Effects of Reconstruction Algorithms on Imaging in Millimeter Wave Transmission System Based on Compressed Sensing**  
ŞENGÜN ERMEYDAN E., Mete M., DEĞİRMENCİ A., ŞAHİN A. B. , ÇANKAYA İ.  
3rd International Conference on Engineering Technology and Applied Sciences, ÜSKÜP, Macedonia, 17 - 21 July 2018, pp.499-504
- VII. **Millimeterwave imaging with compressed sensing: Effects of modulation frequency and data type**  
**Sikiştirilmiş algılama ile milimetredalga görüntüleme: modülasyon frekansi ve veri tipi etkileri**  
Ermeýdan E., Mete M., ŞAHİN A. B. , ALTAN H., ÇANKAYA İ.  
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- VIII. **A Survey on Predicting Survivability of Retinoblastoma on SEER Data**  
Özdemir Özdoğan G., Kaya H., ŞEN B., ÇANKAYA İ.  
International Conference on Advanced Technologies, Computer Engineering and Science, Karabük, Turkey, 11 - 13 May 2018, pp.257-261
- IX. **Local Variance Switching Gaussian Filter**  
DEĞİRMENCİ A., ÇANKAYA İ., KARAL Ö., DEMİRCİ R.  
International Conference on Advanced Technologies, Computer Engineering and Science ICATCES'18, Karabük, Turkey, 11 - 13 May 2018, pp.502-507
- X. **Image Compression Using SVD Method**  
Sütçü A., DEĞİRMENCİ A., KARAL Ö., ÇANKAYA İ.  
International Conference on Advanced Technologies, Computer Engineering and Science, Karabük, Turkey, 11 - 13 May 2018, pp.508-511
- XI. **Relative Energy and Entropy Based Wavelet Packet Decomposition of Images**  
KAPLAN Ç., KARAL Ö., ÇANKAYA İ.  
The IRES – 28th International Conferences on Engineering and Natural Science (ICENS), Amsterdam, Netherlands, 25 - 27 December 2015, pp.22-25
- XII. **Compressive Sensing of Sparse Signals and MRI Images**  
ŞENGÜN ERMEYDAN E., ÇANKAYA İ.  
ISEAIA – Third International Symposium on Engineering, Artificial Intelligence & Applications, 4 - 06 November 2015, pp.23
- XIII. **Biosignal Processing and Medical Imaging BSPMI Software Package Based on Matlab GUI for Education and Research**  
Hadeel A. J. , Hussain A., ÇANKAYA İ.  
ISEAIA – Third International Symposium on Engineering, Artificial Intelligence & Applications, 4 - 06 November 2015
- XIV. **Band Width Increment With The Use Of Alternative Frequency Components**  
YILDIRIM R., ÇELEBİ F. V. , GÖKTAŞ H. H. , ÇANKAYA İ., Gergerli B.  
ICNES – International Congress on Natural and Engineering Sciences, 9 - 13 September 2015
- XV. **Semi Automated Cell Detection Based on Histopathological Images and Color Variation Analysis**  
DEĞİRMENCİ A., ÇANKAYA İ., KARAL Ö., BALCI S.  
ICNES – International Congress on Natural and Engineering Sciences, 9 - 13 September 2015
- XVI. **Ultrason Görüntülerinde Kas Dokusu Referans Alınarak Karaciğer Yağlanmasının Nicel Ölçümlendirilmesi**  
KAPLAN Ç., ÇANKAYA İ., KARAL Ö., Ender E.  
Gülhane Biyomedikal Günleri Ulusal Sempozyumu, Ankara, Turkey, 21 - 22 May 2015, pp.57-58
- XVII. **Design of an interface for non-linear systems analysis with volterra series method Doğrusal olmayan sistemlerin volterra serileri metodu ile analizine yönelik arayüz tasarımı**  
Kaçar S., Çankaya İ.  
18th IEEE Signal Processing and Communications Applications Conference, SIU 2010, Diyarbakır, Turkey, 22 - 24

April 2010, pp.566-569

- XVIII. **İnkübatörlerin Uzaktan İzlenmesi ve Kontrolü İçin Yeni Bir Teknoloji: Kablosuz Algılayıcı Ağlar**  
KIRBAŞ İ., BAYILMIŞ C., KAÇAR S., ÇANKAYA İ.  
Tıp Teknolojileri Ulusal Kongresi, Antalya, Turkey, 14 - 16 October 2010, pp.49-53
- XIX. **Design of an interface for non-linear systems analysis with Volterra series method**  
KAÇAR S., ÇANKAYA İ.  
Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Diyarbakır, Turkey, 22 - 24 April 2010, pp.566-569

## Supported Projects

- ÇANKAYA İ., Project Supported by Higher Education Institutions, Patolojik Görüntülerin Sıkıştırılmış Algılama Yöntemi kullanılarak Sıkıştırılmasının Modellenmesi, Simülasyonu ve Deneysel olarak Gerçekleştirilmesi, 2018 - 2019
- ÇANKAYA İ., Project Supported by Higher Education Institutions, Effect of Reconstruction Algorithms on Imaging in Millimeter Wave Transmission System Based on Compressed Sensing, 2018 - 2018
- ÇANKAYA İ., Project Supported by Higher Education Institutions, Elektrik - Elektronik Mühendisliği Bölümü Laboratuvar Altyapısının Güçlendirilmesi, 2016 - 2017
- ÇANKAYA İ., Project Supported by Higher Education Institutions, Investigation of Computational Load and Parallel Computing of Volterra Series Method for Frequency Analysis of Nonlinear Systems, 2015 - 2016
- ÇANKAYA İ., Project Supported by Higher Education Institutions, Bosna Hersek - ICNES - International Congress on Natural and Engineering Science, 2015 - 2015
- ÇANKAYA İ., Project Supported by Higher Education Institutions, Broken Rotor Bar Fault Detection in Inverter-Fed Squirrel Cage Induction Motors Using Stator Current Analysis and Fuzy Logic, 2013 - 2015
- ÇANKAYA İ., Project Supported by Higher Education Institutions, Kablosuz Algılayıcı Ağ Kullanılarak WEB Tabanlı Görüntü İzleme Sisteminin Gerçekleştirilmesi, 2013 - 2015
- ÇANKAYA İ., Project Supported by Higher Education Institutions, Matlab ve Asp.Net Tabanlı Web Arayüzü Kullanılarak Doğrusal Olmayan Sistemlerin Analizi, 2014 - 2014
- ÇANKAYA İ., Project Supported by Higher Education Institutions, TOK 2013 - 15. Otomatik Kontrol Ulusal Toplantısı, 2013 - 2014

## Citations

Total Citations (SCOPUS):216

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