

## Prof. AHMET BURAK CAN

### Personal Information

**Office Phone:** [+90 312 297 7500](tel:+903122977500) Extension: 132

**Fax Phone:** [+90 312 297 7502](tel:+903122977502)

**Email:** [abc@hacettepe.edu.tr](mailto:abc@hacettepe.edu.tr)

**Web:** <http://web.cs.hacettepe.edu.tr/~abc/>

**Address:** Hacettepe Üniversitesi Bilgisayar Mühendisliği Bölümü 06800, Beytepe/Ankara

### International Researcher IDs

ORCID: 0000-0002-0101-6878

Yoksis Researcher ID: 120372

### Education Information

Doctorate, Purdue University, College Of Science, Computer Science, United States Of America 2002 - 2007

Postgraduate, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 1998 - 2001

Undergraduate, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 1993 - 1998

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Trust and Anonymity in Peer-to-peer Systems, Purdue University, College Of Science, 2007

Postgraduate, LDAP tabanlı Unix kullanıcı tanıma ve denetim sistemi, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği (YI) (Tezli), 2001

### Research Areas

Computer Sciences, Information Security and Reliability, Information System Reliability, Cryptography, Software Security, Computer Networks, Communications and Network Protocols, Computer Vision, Computer Vision, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image Processing, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2018 - Continues

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2013 - 2018

Lecturer PhD, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2007 - 2013

Research Assistant, Purdue University, College Of Science, Computer Science, 2006 - 2007

Research Assistant, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 1998 - 2006

## Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2013 - Continues

Hacettepe Üniversitesi, Trafik Ve Yol Güvenliği Eğitim, Araştırma Ve Uygulama Merkezi, 2012 - Continues

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

- I. **Margin-enhanced average precision optimization for visible-infrared person re-identification**  
Tekeli N., CAN A. B.  
COMPUTERS & ELECTRICAL ENGINEERING, 2024 (SCI-Expanded)
- II. **Ensemble-Based Knowledge Distillation for Video Anomaly Detection**  
ASAL B., CAN A. B.  
APPLIED SCIENCES-BASEL, no.3, 2024 (SCI-Expanded)
- III. **Making JavaScript Render Decisions to Optimize Security-Oriented Crawler Process**  
Aktas O., CAN A. B.  
IEEE ACCESS, vol.12, pp.161688-161696, 2024 (SCI-Expanded)
- IV. **3D Skeletal Volume Templates for Deep Learning-Based Activity Recognition**  
KEÇELİ A. S., Kaya A., CAN A. B.  
ELECTRONICS, vol.11, no.21, 2022 (SCI-Expanded)
- V. **Micro-IDE: A tool platform for generating efficient deployment alternatives based on microservices**  
Aksakalli I. K., Celik T., CAN A. B., Tekinerdogan B.  
SOFTWARE-PRACTICE & EXPERIENCE, vol.52, no.7, pp.1756-1782, 2022 (SCI-Expanded)
- VI. **When CNNs meet random RNNs: Towards multi-level analysis for RGB-D object and scene recognition**  
Caglayan A., Imamoglu N., CAN A. B., Nakamura R.  
COMPUTER VISION AND IMAGE UNDERSTANDING, vol.217, 2022 (SCI-Expanded)
- VII. **Deployment and communication patterns in microservice architectures: A systematic literature review**  
Aksakalli I. K., Celik T., CAN A. B., Tekinerdogan B.  
JOURNAL OF SYSTEMS AND SOFTWARE, vol.180, 2021 (SCI-Expanded)
- VIII. **A Model-Driven Architecture for Automated Deployment of Microservices**  
Aksakalli I. K., Celik T., CAN A. B., Tekinerdogan B.  
APPLIED SCIENCES-BASEL, vol.11, no.20, 2021 (SCI-Expanded)
- IX. **Systematic Approach for Generation of Feasible Deployment Alternatives for Microservices**  
Aksakalli I. K., Celik T., CAN A. B., Tekinerdogan B.  
IEEE ACCESS, vol.9, pp.29505-29529, 2021 (SCI-Expanded)
- X. **Integrating global and local image features for enhanced loop closure detection in RGB-D SLAM systems**  
GÜÇLÜ O., CAN A. B.  
VISUAL COMPUTER, vol.36, no.6, pp.1271-1290, 2020 (SCI-Expanded)
- XI. **k-SLAM: A fast RGB-D SLAM approach for large indoor environments**  
GÜÇLÜ O., CAN A. B.  
COMPUTER VISION AND IMAGE UNDERSTANDING, vol.184, pp.31-44, 2019 (SCI-Expanded)
- XII. **Fast and Effective Loop Closure Detection to Improve SLAM Performance**  
GÜÇLÜ O., CAN A. B.  
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.93, pp.495-517, 2019 (SCI-Expanded)
- XIII. **Examination of various classification strategies in classification of lung nodule characteristics**  
KAYA A., KEÇELİ A. S., CAN A. B.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, no.2, pp.710-725, 2019 (SCI-Expanded)
- XIV. **Nuclear expansion and pore opening are instant signs of neuronal hypoxia and can identify poorly**

### **fixed brains**

DEGHANI A., Karatas H., CAN A. B., ERDEMLI E., YEMISCI M., EREN-KOCAK E., DALKARA T.  
SCIENTIFIC REPORTS, vol.8, 2018 (SCI-Expanded)

- XV. **Combining 2D and 3D deep models for action recognition with depth information**  
KEÇELİ A. S., KAYA A., CAN A. B.  
SIGNAL IMAGE AND VIDEO PROCESSING, vol.12, no.6, pp.1197-1205, 2018 (SCI-Expanded)
- XVI. **Depth features to recognise dyadic interactions**  
KEÇELİ A. S., KAYA A., CAN A. B.  
IET Computer Vision, vol.12, no.3, pp.331-339, 2018 (SCI-Expanded)
- XVII. **Consistency-based trust management in P2P networks**  
ŞAHİN Y., CAN A. B.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.26, no.2, pp.631-643, 2018 (SCI-Expanded)
- XVIII. **Volumetric Object Recognition Using 3-D CNNs on Depth Data**  
ÇAĞLAYAN A., CAN A. B.  
IEEE ACCESS, vol.6, pp.20058-20066, 2018 (SCI-Expanded)
- XIX. **Cyclotorsion Detection by Using Scleral Blood Vessels**  
KAYA A., KEÇELİ A. S., CAN A. B., Çakmak H. B.  
COMPUTERS IN BIOLOGY AND MEDICINE, vol.87, pp.152-161, 2017 (SCI-Expanded)
- XX. **Cyclotorsion measurement using scleral blood vessels**  
KAYA A., KEÇELİ A. S., CAN A. B., Çakmak H. B.  
COMPUTERS IN BIOLOGY AND MEDICINE, vol.87, pp.152-161, 2017 (SCI-Expanded)
- XXI. **A GPU-Based Approach for Automatic Segmentation of White Matter Lesions**  
KEÇELİ A. S., CAN A. B., KAYA A.  
IETE JOURNAL OF RESEARCH, vol.63, no.4, pp.461-472, 2017 (SCI-Expanded)
- XXII. **Gen Trust: A genetic trust management model for peer-to-peer systems**  
TAHTA U. E., Sen S., CAN A. B.  
APPLIED SOFT COMPUTING, vol.34, pp.693-704, 2015 (SCI-Expanded)
- XXIII. **A weighted rule based method for predicting malignancy of pulmonary nodules by nodule characteristics**  
KAYA A., CAN A. B.  
JOURNAL OF BIOMEDICAL INFORMATICS, vol.56, pp.69-79, 2015 (SCI-Expanded)
- XXIV. **RECOGNITION OF BASIC HUMAN ACTIONS USING DEPTH INFORMATION**  
KEÇELİ A. S., CAN A. B.  
INTERNATIONAL JOURNAL OF PATTERN RECOGNITION AND ARTIFICIAL INTELLIGENCE, vol.28, no.2, 2014 (SCI-Expanded)
- XXV. **SORT: A Self-Organizing Trust Model for Peer-to-Peer Systems**  
CAN A. B., BHARGAVA B.  
IEEE TRANSACTIONS ON DEPENDABLE AND SECURE COMPUTING, vol.10, no.1, pp.14-27, 2013 (SCI-Expanded)
- XXVI. **A computer program (TSecSoft) to determine mineral percentages using photographs obtained from thin sections**  
YESİLOĞLU-GULTEKİN N., KEÇELİ A. S., SEZER E., CAN A. B., GÖKÇEOĞLU C., BAYHAN H.  
COMPUTERS & GEOSCIENCES, vol.46, pp.310-316, 2012 (SCI-Expanded)
- XXVII. **Apoptotic and necrotic death mechanisms are concomitantly activated in the same cell after cerebral ischemia**  
Unal-Cevik I., KILINC M., CAN A. B., GURSOY-OZDEMİR Y., DALKARA T.  
STROKE, vol.35, no.9, pp.2189-2194, 2004 (SCI-Expanded)

### **Articles Published in Other Journals**

- I. **k-anonymity Chord for Anonymous Query Response**  
CAN A. B., Bhargava B.  
INTERNATIONAL JOURNAL OF NEXT-GENERATION COMPUTING, vol.5, no.3, pp.274-289, 2014 (ESCI)
- II. **Afyon-Akşehir Grabeni Batı Kenarının tektonik Özellikleri Üzerine Jeolojik ve Jeofizik Gözlemler: İki Evreli Genişleme Modeli hakkındaki Tartışmalara Bir Katkı**  
East K., Kaya S., Ecevitoglu B., Işık V., Kaypak B., Seyitoğlu G., Uyar G. G., Can A. B., Baksı E.  
HACETTEPE YER BİLİMLERİ, vol.35, no.1, pp.1-16, 2014 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **RGB-D SLAM with Deep Depth Completion**  
SERHATOĞLU A. O., Guclu O., CAN A. B.  
21st International Conference on Artificial Intelligence and Soft Computing, ICAISC 2022, Zakopane, Poland, 19 - 23 June 2022, vol.13589 LNAI, pp.59-67
- II. **Distance based Training for Cross-Modality Person Re-Identification**  
Tekeli N., CAN A. B.  
IEEE/CVF International Conference on Computer Vision (ICCV), Seoul, South Korea, 27 October - 02 November 2019, pp.4540-4549
- III. **RGB-D Indoor Mapping Using Deep Features**  
Guclu O., Caglayan A., CAN A. B.  
32nd IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), California, United States Of America, 16 - 20 June 2019, pp.1248-1257
- IV. **AndMFC: Android Malware Family Classification Framework**  
Turker S., CAN A. B.  
IEEE 30th Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), İstanbul, Turkey, 08 September 2019
- V. **Segmentation of Objects in RGB-D Scenes by Clustering Surfaces**  
YALIÇ H. Y., CAN A. B.  
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- VI. **İskelet Hacmi ve Derin Öğrenme ile Hareket Tanıma**  
KEÇELİ A. S., KAYA A., CAN A. B.  
2017 25TH SIGNAL PROCESSING AND COMMUNICATIONS APPLICATIONS CONFERENCE (SIU), Antalya, Turkey, 15 - 18 May 2017
- VII. **An Empirical Analysis of Deep Feature Learning for RGB-D Object Recognition**  
ÇAĞLAYAN A., CAN A. B.  
14th International Conference on Image Analysis and Recognition (ICIAR), Montreal, Canada, 5 - 07 July 2017, vol.10317, pp.312-320
- VIII. **3D Convolutional Object Recognition using Volumetric Representations of Depth Data**  
ÇAĞLAYAN A., CAN A. B.  
15th IAPR International Conference on Machine Vision Applications (MVA), Nagoya, Japan, 8 - 12 May 2017, pp.125-128
- IX. **Low Latency Action Recognition with Depth Information**  
KEÇELİ A. S., CAN A. B.  
Proceedings of the 11th Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, Rome, Italy, 27 - 29 February 2016
- X. **Histogram Based Visual Place Recognition for Improving SLAM Performance**  
GÜÇLÜ O., CAN A. B.  
IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC), Braganca, Portugal, 4 - 06 May 2016, pp.174-180
- XI. **Maligancy prediction by using characteristic-based fuzzy sets: A preliminary study**

- KAYA A., CAN A. B.  
IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2015, İstanbul, Turkey, 2 - 05 August 2015
- XII. **A Comparison of Feature Detectors and Descriptors in RGB-D SLAM Methods**  
GÜÇLÜ O., CAN A. B.  
12th International Conference on Image Analysis and Recognition (ICIAR), Niagara Falls, Canada, 22 - 24 July 2015, vol.9164, pp.297-305
- XIII. **Determining Malignancy of Small Pulmonary Nodules by Nodule Characteristics**  
KAYA A., CAN A. B.  
6th European Conference of the International Federation for Medical and Biological Engineering, 7 - 11 September 2014
- XIV. **A Multimodal Approach for Recognizing Human Actions Using Depth Information**  
KEÇELİ A. S., CAN A. B.  
22nd International Conference on Pattern Recognition (ICPR), Stockholm, Sweden, 24 - 28 August 2014, pp.421-426
- XV. **Action Recognition Based on Feature Extraction From Time Series**  
KEÇELİ A. S., CAN A. B.  
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.485-488
- XVI. **Evolving a Trust Model for Peer-to-Peer Networks Using Genetic Programming**  
Tahta U. E., CAN A. B., Sen S.  
17th European Conference on Applications of Evolutionary Computation (EvpApplications), Granada, Nicaragua, 23 - 25 April 2014, vol.8602, pp.3-14
- XVII. **eFis: A Fuzzy Inference Method for Predicting Malignancy of Small Pulmonary Nodules**  
KAYA A., CAN A. B.  
11th International Conference on Image Analysis and Recognition (ICIAR), Portugal, 22 - 24 October 2014, vol.8815, pp.255-262
- XVIII. **Derinlik Bilgisi Kullanılarak İnsan Hareketlerinin Tanınması**  
KEÇELİ A. S., CAN A. B.  
2013 21st Signal Processing and Communications Applications Conference (SIU), Haspolat, Turkey, Turkey, 24 - 26 April 2013
- XIX. **Characterization of Lung Nodules**  
KAYA A., CAN A. B.  
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- XX. **Recognition of Human Actions By using Depth Information**  
KEÇELİ A. S., CAN A. B.  
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- XXI. **A Plant Recognition Approach Using Shape and Color Features in Leaf Images**  
ÇAĞLAYAN A., GÜÇLÜ O., CAN A. B.  
17th International Conference on Image Analysis and Processing (ICIAP), Naples, Italy, 9 - 13 September 2013, vol.8157, pp.161-170
- XXII. **Maden Göçüklerinde Mahsur Kalan İşçilerin Mikrosismik Yöntemlerle Saptanması**  
KAYPAK B., UYAR G. G., AKSOY C. O., TEZEL T., CAN A. B.  
Maden İşletmelerinde İşçi Sağlığı ve İş Güvenliği Sempozyumu, Turkey, 24 - 25 November 2011
- XXIII. **Modelling of Non Linear behavior of rock blasts**  
UYAR G. G., ECEVİTOĞLU G. B., KAYPAK B., CAN A. B., BABAYİĞİT E.  
22nd World Mining Congress & Expo, 11 - 16 September 2011
- XXIV. **GPU TABANLI BEYİN BÖLÜTLEME YÖNTEMİ**  
KEÇELİ A. S., CAN A. B.  
Signal Processing and Communications Applications (SIU), 2011 IEEE 19th Conference on, Antalya, Turkey, 20 - 22 April 2011
- XXV. **Beyaz Cevher Lezyonlarının Otomatik Bölütlenmesi**

- KEÇELİ A. S., CAN A. B.  
2009 IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, Turkey, 9 - 11 April 2009, pp.443-446
- XXVI. **Automatic Recognition of Traffic Signs**  
YALIÇ H. Y., CAN A. B.  
7th International Symposium on Image and Signal Processing and Analysis (ISPA), Dubrovnik, Croatia, 4 - 06 September 2011, pp.361-366
- XXVII. **Designing a pattern stabilization method using scleral blood vessels for laser eye surgery**  
KAYA A., CAN A. B., Çakmak H. B.  
2010 20th International Conference on Pattern Recognition, ICPR 2010, İstanbul, Turkey, 23 - 26 August 2010, pp.698-701
- XXVIII. **Patlatmalarda Yüksek Hızlı Video Kamera ve Sismometrelerin Eş Zamanlı Kullanılması**  
UYAR G. G., ECEVİTOĞLU G. B., CAN A. B., KAYPAK B., BABAYİĞİT E., ERGUDER İ., BOZTAŞ S.  
VI. Delme-Patlatma Sempozyumu, Turkey, 4 - 05 November 2010
- XXIX. **Predetermination of the fault crossing the underground coal mine galleries by seismic reflection method an application at a longwall coal mine in Turkey**  
UYAR G. G., ECEVİTOĞLU G. B., KAYPAK B., CAN A. B.  
Twenty-Seventh Annual International Pittsburg Coal Conference, İstanbul, Turkey, 11 - 14 October 2010
- XXX. **An Experimental Study on the Min-Image Production for Determination of Mineral Percentages**  
GÖKÇEOĞLU C., GÜLTEKİN N., KEÇELİ A. S., SEZER E., CAN A. B., BAYHAN H.  
EGU General Assembly 2012, Viyana, Austria, 22 - 27 April 2012
- XXXI. **Anonymous Access to Trust Information Using K-anonymity Chord**  
CAN A. B., Bhargava B.  
2nd International Conference on Advances in P2P Systems (AP2PS), Florence, Italy, 25 - 30 October 2010, pp.14-19
- XXXII. **Developing an eye tracking method for laser eye surgery Lazer göz cerrahisi için bir göz takip yöntemi geliştirilmesi**  
KAYA A., CAN A. B.  
2009 IEEE 17th Signal Processing and Communications Applications Conference, SIU 2009, Antalya, Turkey, 9 - 11 April 2009, pp.392-395
- XXXIII. **Kaunos antik liman bölgesi ve Kaunos tuzlasındaki yer radarı ve sığ deniz sismiği araştırmaları**  
ECEVİTOĞLU G. B., UYAR G. G., KAYPAK B., CAN A. B.  
Kaunos Antik Liman ve Tuzla Çalışmaları Çalıştayı, Turkey, 21 August 2009
- XXXIV. **Developing an Eye Tracking Method for Laser Eye Surgery**  
KAYA A., CAN A. B.  
IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.634-637
- XXXV. **Automatic Segmentation Of White Matter Lesions**  
KEÇELİ A. S., CAN A. B.  
IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.443-446

## Supported Projects

- Can A. B., TUBITAK Project, Akıllı Video Gözetleme Sistemleri İçin Yeni Anormal Olay Tespit Yöntemlerinin Geliştirilmesi, 2019 - 2022
- CAN A. B., TUBITAK Project, Kgys Akıllı Destek Yazılımları Geliştirilmesi Projesi, 2016 - 2019
- CAN A. B., Project Supported by Higher Education Institutions, 25 Sinyal İşleme ve İletişim Uygulamaları Kurultayı, 2017 - 2017
- CAN A. B., ÇAĞLAYAN A., Project Supported by Higher Education Institutions, RGB-D Nesne Tanıma İçin Derin Niteliklerin

Öğrenilmesinin Deneysel Bir Analizi, 2017 - 2017

CAN A. B., Project Supported by Higher Education Institutions, 7 Uluslararası Ortamsal Sistemler Ağlar ve Teknolojiler Konferansı, 2016 - 2017

KEÇELİ A. S., CAN A. B., Project Supported by Higher Education Institutions, Derinlik Bilgisi Kullanılarak Düşük Gecikme Süreli Hareket Tanıma, 2015 - 2016

CAN A. B., GÜÇLÜ O., Project Supported by Higher Education Institutions, RGBD SLAM Yöntemlerindeki Nitelik Bulucu ve Tanımlayıcıların Bir Karşılaştırması, 2015 - 2016

## **Metrics**

Publication: 64

Citation (WoS): 360

Citation (Scopus): 683

H-Index (WoS): 8

H-Index (Scopus): 8

## **Non Academic Experience**

Türk Silahlı Kuvvetleri

Türk Silahlı Kuvvetleri

Türkiye İstatistik Kurumu

Hacettepe Üniversitesi Hastaneleri

Hacettepe Üniversitesi Bilgi İşlem Dairesi Başkanlığı