

## Prof. Hazım Kemal Ekenel

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: A-5293-2016

ScopusID: 55958877400

Yoksis Researcher ID: 121122

### Biography

Dr. Ekenel is an Associate Professor at the Department of Computer Engineering in Istanbul Technical University, where he directs the [?Smart Interaction, Mobile Intelligence, and Multimedia Technologies \(SiMiT\) Research Group?](#). He received his B.Sc. and M.Sc. degrees in Electrical and Electronic engineering from Bogazici University in 2001 and 2003, respectively, and Ph.D. degree in Computer Engineering from the University of Karlsruhe (TH)/Karlsruhe Institute of Technology in 2009.

He has played a leading role in face analysis tasks in several large-scale European and German research projects. He was the task leader for face recognition in the Computers in the Human Interaction Loop (CHIL) project, an Integrated Project funded under the European Commission's Sixth Framework Programme with a budget of 24 million EUR. He organized international face recognition evaluations within the CLEAR evaluation campaigns (<http://www.clear-evaluation.org/>). He has been responsible for face recognition system in the German SFB588 Humanoid Robots project. He has been the task leader of face recognition in the French-German Quaero project funded by French State Agency for Innovation with a budget of 200 million EUR. He developed the best performing face detection system in the CHIL 2004, 2005 evaluations and the best performing face recognition system in the CLEAR 2006, 2007 evaluations. In addition, his team was ranked third among the 14 research institutions worldwide and had the first place among the six European teams participating to the Facial Expression Recognition and Analysis Challenge in 2011.

In 2008, he received the EBF European Biometric Research Award. The generality, speed, and robustness of his approach facilitated several deployments for a wide variety of real-world applications, such as entrance monitoring and person retrieval. Several demonstration sessions have been held in international conferences and events. He received the Best Demo Award at the IEEE International Conference on Automatic Face and Gesture Recognition in 2008. His face analysis technology has also been used by several research labs and companies. He was nominated for a prestigious German applied research prize by Technicolor SA (formerly Thomson SA), Exalead, Fraunhofer IOSB, and Videmo Intelligente Videoanalyse in 2010. After completing his doctoral studies, he was promoted to group leader position at the KIT. He is a recipient of a Young Investigator Grant that he was awarded within the German Excellence Initiative, with which he has founded the Facial Image Processing and Analysis (<http://face.cs.kit.edu/>) group at the Department of Computer Science in Karlsruhe Institute of Technology.

Since January 2011, he has been coordinating the Benchmarking Facial Image Analysis Technologies (BeFIT) initiative. He is the primary organizer of the BeFIT workshops 2011 and 2012. Together with Dr. Gunes from QMUL, he organized the International Workshop on Affective Computing for Mobile HCI (<http://www.ac4mobhci2012.itu.edu.tr/>) that took place in Istanbul, Turkey. He has been on the program committee for a number of international conferences and

workshops including ICCV, ACCV, FG, ICME, BTAS, and AVSS.

## Education Information

Doctorate, Universitat Karlsruhe, Bilgisayar Mühendisliği, Germany 2004 - 2009

Postgraduate, Bogazici University, Institute Of Science, Elektrik-Elektronik Mühendisliği (YL) (Tezli), Turkey 2001 - 2003

Undergraduate, Bogazici University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1997 - 2001

## Foreign Languages

English

## Dissertations

Doctorate, A robust face recognition algorithm for real-world applications, Universitat Karlsruhe, Bilgisayar Müh., Bilgisayar Müh., 2009

Postgraduate, Expression and Illumination Insensitive Independent Components and Wavelet Subbands for Face Recognition, Boğaziçi Üniversitesi, Elektrik-Elektronik Müh., Elektrik-Elektronik Müh., 2003

## Research Areas

Technical Sciences, Computer Sciences, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image Processing

## Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Bilgisayar Ve Bilişim Fakültesi, Bilgisayar Mühendisliği Bölümü, 2014 - Continues

Assistant Professor, Istanbul Technical University, Bilgisayar Ve Bilişim Fakültesi, Bilgisayar Mühendisliği Bölümü, 2012 - 2014

Lecturer PhD, Istanbul Technical University, Bilgisayar Ve Bilişim Fakültesi, Bilgisayar Mühendisliği Bölümü, 2011 - 2012

Lecturer PhD, Universitaet Fridericiana zu Karlsruhe, 2009 - 2011

Research Assistant, Universitaet Fridericiana zu Karlsruhe, 2004 - 2009

## Academic and Administrative Experience

İstanbul Teknik Üniversitesi, 2013 - 2016

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

- I. **Unconstrained face mask and face-hand interaction datasets: building a computer vision system to help prevent the transmission of COVID-19**  
Eyiokur F. I., Ekenel H. K., Waibel A.  
SIGNAL IMAGE AND VIDEO PROCESSING, vol.17, no.4, pp.1027-1034, 2023 (SCI-Expanded)
- II. **A survey on computer vision based human analysis in the COVID-19 era**

- Eyiokur F. I., Kantarcı A., Erakın M. E., Damer N., Ofli F., Imran M., Križaj J., Salah A. A., Waibel A., Štruc V., et al.  
Image and Vision Computing, vol.130, 2023 (SCI-Expanded)
- III. **Deep patch-wise supervision for presentation attack detection**  
Kantarcı A., Dertli H., Ekenel H. K.  
IET BIOMETRICS, vol.11, no.5, pp.396-406, 2022 (SCI-Expanded)
- IV. **Multimodal soft biometrics: combining ear and face biometrics for age and gender classification**  
Yaman D., Eyiokur F. I., Ekenel H. K.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.81, no.16, pp.22695-22713, 2022 (SCI-Expanded)
- V. **MOCCA: Multilayer One-Class Classification for Anomaly Detection**  
Massoli F. V., Falchi F., Kantarcı A., Aktı Ş., Ekenel H. K., Amato G.  
IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS, vol.33, no.6, pp.2313-2323, 2022 (SCI-Expanded)
- VI. **Benefiting from multitask learning to improve single image super-resolution**  
Rad M. S., Bozorgtabar B., Musat C., Marti U., Basler M., Ekenel H. K., Thiran J.  
NEUROCOMPUTING, vol.398, pp.304-313, 2020 (SCI-Expanded)
- VII. **Learn to synthesize and synthesize to learn**  
Bozorgtabar B., Rad M. S., Ekenel H. K., Thiran J.  
COMPUTER VISION AND IMAGE UNDERSTANDING, vol.185, pp.1-11, 2019 (SCI-Expanded)
- VIII. **From 2D to 3D real-time expression transfer for facial animation**  
Ekmen B., Ekenel H. K.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.78, no.9, pp.12519-12535, 2019 (SCI-Expanded)
- IX. **Cross-dataset person re-identification using deep convolutional neural networks: effects of context and domain adaptation**  
Genc A., Ekenel H. K.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.78, no.5, pp.5843-5861, 2019 (SCI-Expanded)
- X. **Domain adaptation for ear recognition using deep convolutional neural networks**  
Eyiokur F. I., Yaman D., Ekenel H. K.  
IET BIOMETRICS, vol.7, no.3, pp.199-206, 2018 (SCI-Expanded)
- XI. **DEEP REPRESENTATION AND SCORE NORMALIZATION FOR FACE RECOGNITION UNDER MISMATCHED CONDITIONS**  
Ghaleb E., Ozbulak G., Gao H., Ekenel H. K.  
IEEE INTELLIGENT SYSTEMS, vol.33, no.3, pp.43-46, 2018 (SCI-Expanded)
- XII. **Vision-based game design and assessment for physical exercise in a robot-assisted rehabilitation system**  
Erdogan H., Palaska Y., MAŞAZADE E., EROL BARKANA D., Ekenel H. K.  
IET COMPUTER VISION, vol.12, no.1, pp.59-68, 2018 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Çok Kipli Yüz Analizi**  
Çanak B., EKENEL H. K.  
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.21, no.62, pp.649-658, 2019 (Peer-Reviewed Journal)
- II. **Towards Truly Affective AAL Systems**  
Pudane M., Petrovica S., Lavendelis E., Ekenel H. K.  
ENHANCED LIVING ENVIRONMENTS: ALGORITHMS, ARCHITECTURES, PLATFORMS, AND SYSTEMS, vol.11369, pp.152-176, 2019 (Scopus)
- III. **İnsan-İnsan Etkileşimini Arttırmaya Yönelik Çok Oyunculu Mobil ve Sosyal Oyun Tasarımı**  
ŞAHİN Y. H., Erdoğan H., EKENEL H. K.  
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, pp.1197-1208, 2018 (Peer-Reviewed Journal)

## Supported Projects

Ekenel H. K., Eyiokur F. İ., Yaman D., Project Supported by Higher Education Institutions, Biyometrik Tanıma Amaçlı Kulak İmgelerinin Kullanımı, 2017 - 2019

Ekenel H. K., Project Supported by Higher Education Institutions, Apparent Age Estimation Using Ensemble of Deep Learning Models, 2016 - 2018

Ekenel H. K., Project Supported by Higher Education Institutions, Otomatik Yüz Analizine Dayalı Engellilere ve Hastalara Yardımcı Teknolojiler, 2014 - 2018

Ekenel H. K., Project Supported by Higher Education Institutions, A Face Recognition Based Multiplayer Mobile Game Applicaiton, 2014 - 2018

Ekenel H. K., Project Supported by Higher Education Institutions, Real Time Face Swapping in Video Sequences, 2012 - 2018

Ekenel H. K., Project Supported by Higher Education Institutions, Evrimsel Sinir Ağı Özellikler ile Kişiyi Yeniden Tanıma, 2016 - 2016

Ekenel H. K., Project Supported by Higher Education Institutions, İnsan Makine Etkileşimi için Otomatik Yüz Analizi, 2012 - 2016

## Scientific Refereeing

Image and Vision Computing, SCI Journal, July 2017

IEEE Transactions on Affective Computing, SCI Journal, June 2017

IEEE Transactions on Circuits and Systems for Video Technology, SCI Journal, May 2017

IEEE Transactions on Circuits and Systems for Video Technology , SCI Journal, April 2017

Pattern Recognition Letters, SCI Journal, March 2017

Turkish Journal of Electrical Engineering and Computer Sciences, SCI Journal, March 2017

Turkish Journal of Electrical Engineering and Computer Sciences, SCI Journal, March 2017

IEEE Transactions on Affective Computing, SCI Journal, November 2016

Turkish Journal of Electrical Engineering and Computer Sciences, SCI Journal, November 2016

Turkish Journal of Electrical Engineering and Computer Sciences, SCI Journal, August 2016

Turkish Journal of Electrical Engineering and Computer Sciences, SCI Journal, May 2016

Turkish Journal of Electrical Engineering and Computer Sciences, SCI Journal, May 2016

Image and Vision Computing, SCI Journal, April 2016

Multimedia Tools and Applications, SCI Journal, February 2016

IEEE Transactions on Information Forensics and Security, SCI Journal, January 2016

IEEE Transactions on Information Forensics and Security, SCI Journal, April 2015

Pattern Recognition Letters, SCI Journal, March 2015

IEEE Transactions on Image Processing, SCI Journal, August 2014

Image and Vision Computing, SCI Journal, October 2013

IEEE Transactions on Image Processing, SCI Journal, August 2013

Multimedia Tools and Applications, SCI Journal, August 2013

IEEE Transactions on Image Processing, SCI Journal, April 2013

Image and Vision Computing, SCI Journal, November 2012

Image and Vision Computing, SCI Journal, October 2012

IEEE Transactions on Image Processing, SCI Journal, September 2012

IEEE Transactions on Image Processing, SCI Journal, July 2012

Multimedia Tools and Applications, SCI Journal, January 2012

Turkish Journal of Electrical Engineering and Computer Sciences, SCI Journal, September 2011

Image and Vision Computing, SCI Journal, August 2011

Image and Vision Computing, SCI Journal, July 2011

Multimedia Tools and Applications, SCI Journal, July 2011

Multimedia Tools and Applications, SCI Journal, May 2011  
Multimedia Tools and Applications, SCI Journal, June 2010  
Computer Vision and Image Understanding, SCI Journal, September 2007  
Computer Vision and Image Understanding, SCI Journal, August 2007

## Metrics

Publication: 195  
Citation (WoS): 520  
Citation (Scopus): 2506  
H-Index (WoS): 11  
H-Index (Scopus): 24

## Congress and Symposium Activities

25. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Moderator, Antalya, Turkey, 2017  
25th Signal Processing and Communication Application Conference (SIU), Attendee, Antalya, Turkey, 2017  
ACM ICMI Facial Expressions in the Wild Workshop (EmotiW), Attendee, Tōkyō, Japan, 2016  
International Workshop on Intelligent Educational Systems, Technology-enhanced Learning and Technology Transfer Models (INTEL-EDU), Attendee, Praha, Czech Republic, 2016  
15th International Conference of the Biometrics Special Interest Group (BIOSIG), Attendee, Darmstadt, Germany, 2016  
CVPR Biometrics Workshop, Attendee, Nevada, United States Of America, 2016  
CVPR ChaLearn Looking at People and Faces of the World: Face Analysis Workshop and Challenge, Attendee, Nevada, United States Of America, 2016  
24th Signal Processing and Communication Application Conference (SIU), Attendee, Zonguldak, Turkey, 2016  
TIPTEKNO'15, Attendee, Muğla, Turkey, 2015  
2015 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Attendee, Massachusetts, United States Of America, 2015  
International Conference on Biometrics (ICB), Attendee, Phuket, Thailand, 2015  
IEEE International Conference on Automatic Face and Gesture Recognition (FG), Attendee, Ljubljana, Slovenia, 2015  
10th International Conference on Artificial Intelligence Applications and Innovations (AIAI), Attendee, Ródos, Greece, 2014  
22th Signal Processing and Communication Application Conference (SIU), Attendee, Trabzon, Turkey, 2014  
2nd International Workshop on Emotion Representation, Analysis and Synthesis in Continuous Time and Space (EmoSPACE), Attendee, Shanghai, China, 2013  
International Conference on Computer Vision Theory and Applications (VISAPP), Attendee, Roma, Italy, 2012  
1st IEEE Intl. Workshop on Benchmarking Facial Image Analysis Technologies (BeFIT 2011), Attendee, Barcelona, Spain, 2011  
19th Signal Processing and Communications Applications Conference (SIU), Attendee, Turkey, 2011  
3rd International Workshop on Automated Information Extraction in Media Production (AIEMPro'10), Attendee, Firenze, Italy, 2010  
International Conference on Pattern Recognition (ICPR'10), Attendee, İstanbul, Turkey, 2010  
International Conference on Biometrics (ICB'09), Attendee, Sassari, Italy, 2009  
TRECVID Evaluation Workshop, Attendee, Maryland, United States Of America, 2008  
8th IEEE Int. Conference on Face and Gesture Recognition, Attendee, Amsterdam, Netherlands, 2008  
16th Signal Processing and Communications Applications Conference (SIU), Attendee, Turkey, 2008  
TRECVID Evaluation Workshop, Attendee, Maryland, United States Of America, 2007  
International Conference on Computer Vision (ICCV'07), Attendee, Rio De Janeiro, Brazil, 2007  
IEEE International Conference on Multimedia & Expo, Attendee, Beijing, China, 2007

CVPR Biometrics Workshop, Attendee, Minnesota, United States Of America, 2007  
15th Signal Processing and Communications Applications (SIU), Attendee, Eskişehir, Turkey, 2007  
CLEAR Evaluation Workshop, Attendee, Maryland, United States Of America, 2007  
International Conference on Computer Vision Systems, ICVS 2007, Attendee, Bielefeld, Germany, 2007  
International Conference on Computer Vision Systems, ICVS 2007,, Attendee, Bielefeld, Germany, 2007  
2nd Intl. Workshop on Human-Centered Robotics Systems 2006, Attendee, München, Germany, 2006  
CVPR Biometrics Workshop, Attendee, New York, United States Of America, 2006  
CLEAR Evaluation Workshop, Attendee, Southampton, United Kingdom, 2006  
7th International Conference Automatic Face and Gesture Recognition (FG2006), Attendee, Southampton, United Kingdom, 2006  
14th Signal Processing and Communications Applications (SIU), Attendee, Antalya, Turkey, 2006  
13th European Signal Processing Conference (EUSIPCO 2005), Attendee, Turkey, 2005  
11th Signal Processing and Communications Applications Conference (SIU), Attendee, Turkey, 2003  
National Conference on Turkish Linguistics, Attendee, Eskişehir, Turkey, 2003  
10th Signal Processing and Communications Applications Conference (SIU), Attendee, Denizli, Turkey, 2002  
XVI. National Conference on Turkish Linguistics, Attendee, Ankara, Turkey, 2002

## **Non Academic Experience**

İleri Görüntü İşleme Ve Yazılım Tekn.  
Business Establishment Private, Vistek  
Vistek Ltd.