CIGDEM BEYAN - CURRICULUM VITAE

PERSONAL DETAILS

GitHub: cbeyan
SCOPUS Author ID: 43260919000
ORCID ID: 0000-0002-9583-0087
Web of Science ResearcherID: AAA-4235-2019

EDUCATION

PhD (September 2011 – May 2015)

University of Edinburgh, Edinburgh, United Kingdom
School of Informatics
Institute of Perception, Action and Behaviour (IPAB)
Thesis Title: Detection of Unusual Fish Trajectories from Underwater Videos
First Supervisor: Prof. Robert Fisher
Second Supervisor: Prof. Vittorio Ferrari

Master of Science (September 2008 – December 2010)

Middle East Technical University (METU), Ankara, Turkey
Graduate School of Informatics
Department of Information Systems
GPA: 3.88/4.00
Thesis Title: Object Tracking for Surveillance Applications Using Thermal and Visible Band
Video Data Fusion
Supervisor: Prof. Alptekin Temizel

Bachelor of Science (September 2004 – June 2008)

Baskent University, Ankara, Turkey
Faculty of Engineering
Department of Computer Engineering
GPA: 3.64/4.00 (High Honour, ranked 2nd among the graduates of that year)
Thesis Title: Cancer Diagnosis with Gene Expression Data
Supervisor: Prof. Hasan Ogul

CURRENT WORK POSITION

March 2021 –

Assistant Professor (*RTDA - Ricercatore a tempo determinato legge 240/10 art.24-a*)
Department of Information Engineering and Computer Science (DISI)
University of Trento (UNITN), Trento, Italy

April 2021 –

Affiliated Researcher
Pattern Analysis & Computer Vision (PAVIS) Research Line
Istituto Italiano di Tecnologia (IIT), Genoa, Italy

PREVIOUS WORK POSITIONS

September 2015 – March 2021

Postdoctoral Researcher
Pattern Analysis & Computer Vision (PAVIS) Research Line
Istituto Italiano di Tecnologia (IIT), Genoa, Italy
Major Responsibilities: Carrying out research on human behaviour understanding, particularly nonverbal communication analysis of human-human social interactions (social signal processing), co-supervising PhD students, organizing, planning and management of EU and national project proposals.

May 2015 – July 2015

Course Assistant to prepare practical assignments using Lego Mindstorms Robot, for the course "Introduction to Vision and Robotics" *http://www.drps.ed.ac.uk/14-15/dpt/cxinfr09019.htm*
University of Edinburgh
School of Informatics
Edinburgh, United Kingdom

September 2011 – June 2014

Guest Lecturer, Teaching Assistant, Tutor, Marker and Demonstrator[+]
University of Edinburgh
School of Informatics
Edinburgh, UK

September 2008 – September 2011

Research & Teaching Assistant[+]
Baskent University
Department of Computer Engineering
Ankara, Turkey

SCIENTIFIC QUALIFICATION *(ABILITAZIONE SCIENTIFICA)*

2 February 2022 – 2 February 2031

National (Italian) scientific qualification to function as Associate Professor (***Abilitazione Scientifica, Fascia II***) in Section **09/H1** Information Processing Systems (*Sistemi di Elaborazione delle Informazioni*)

31 January 2022 – 31 January 2031

National (Italian) scientific qualification to function as Associate Professor (***Abilitazione Scientifica, Fascia II***) in Section **01/B1** Computer Science (*Informatica*)

RESEARCH INTEREST

- Social Computing & Affective Computing & Multimedia & Social Robotics
  (Leadership identification, personality trait analysis, multimodal emotion recognition, visual perception of social robots, etc.)

- Computer Vision & Multimedia
  (Human / animal behaviour understanding, action recognition, trajectory analysis, anomaly detection, active speaker detection, gaze estimation, egocentric vision, etc.)

- Machine & Deep Learning
  (Classification of imbalanced data, active learning, unsupervised learning, domain adaptation, self-supervised learning, representation learning, etc.)

RESEARCH PROJECTS♦

♦ *PhD., MSc. and BEng. thesis (see section "Education") as well as Master of Science and PhD (co-)supervised projects (see section "Supervision Experience") are excluded from this section.*

October 2021 – Ongoing
Project Name: Computer Vision to Expand Monitoring and Accelerate Assessment of Coastal Fish (CoastVision)
Role: Co-investigator (*Local PI, fundraiser*)
Funding Body: Research Council of Norway

Total Budget: ~1.2M €
Candidate's Budget: ~60K €
Number of Partners: 6
Short Description: CoastVision uses the power of deep learning to refine and extend a computer vision pipeline for detecting, classifying and sizing the key fish species in shallow water coastal ecosystems, facilitating a transition to fully automated video analysis. Computer vision for re-identifying individuals solely based on their unique visible features is also developed. *https://fishlarvae.org/activities/current-projects/*

April 2021 – April 2022
Project Name: Assistive Robots wiTh EMotIonal Skills (ARTEMIS)
Role: Co-principal Investigator together with Prof. Elisa Ricci (University of Trento) and Dr. Federica Arrigoni (University of Trento)
Funding Body: Fondazione Valorizzazione Ricerca (VRT) *https://www.fondazionevrt.it/*
Total Budget: 24,900 €
Short Description: ARTEMIS aims to develop new approaches based on artificial intelligence methods that allow social robots to interpret the emotional states of patients and assess their level of comfort in interacting with the robot. *https://www.fondazionevrt.it/7-next-generation-2021*

March 2021 – Ongoing
Project Name: AI4Media
Role: Participant (University of Trento)
Funding Body: EU Horizon 2020 Research and Innovation Programme (GA No. 951911)
Total Budget: ~12M €
Number of Partners: 30
Short Description: AI4Media project aims to deliver the next generation of core AI advances and training to serve the Media sector, while ensuring that the European values of ethical and trustworthy AI are embedded in future AI deployments. *https://www.ai4media.eu/*

March 2021 – Ongoing
Project Name: Socially Pertinent Robots in Gerontological Healthcare (SPRING)
Role: Participant (University of Trento)
Funding Body: EU H2020-ICT research and innovation action (GA No. 871245)
Total Budget: ~8.5M €
Number of Partners: 8
Short Description: SPRING project focuses on Socially Assistive Robots (SARs) and their applications in healthcare and psychological well-being. The goal is to develop a novel paradigm of socially-aware robots, grounded on modern statistical and deep-learning methods, and harnessed by state-of-the-art algorithms for computer vision, audio-signal processing, sensor-based robot control, and spoken dialog systems. https://spring-h2020.eu/

September 2019 – December 2020
Project Name: Multimodal Nonverbal Behavior Analysis of Public Speakers
Role: External collaborator, collaboration with: Dr. Omer Sumer, Prof. Ulrich Trautwein, and Prof. Enkelejda Kasneci (Uni. of Tübingen, Germany)
Supported By: Leibniz-WissenschaftsCampus Tübingen "Cognitive Interfaces".

Short Description: This project investigates the contribution of different nonverbal behavioural cues to estimate presentation competence. According to Tübingen Instrument for Presentation Competence (TIP), there exist six components of presentation competence. The automatic analyses were performed on videos of 251 students and compared to manual ratings according to the TIP. The outputs of this project are reachable from: *https://arxiv.org/abs/2105.02636*

September 2015 – September 2019
Project Name: Multimodal Identification of Emergent Leaders in Small Group Social Interactions
Role: Participant, collaboration with: Dr. Francesca Capozzi (McGill University, Canada), Prof. Cristina Becchio (IIT C'MON, University of Turin, Italy), and Prof. Vittorio Murino (IIT PAVIS, Italy)
Short Description: This project's aim is to automatically detect emergent leaders (the leader who naturally arises from an interacting group rather than from a higher authority) from audio-visual recordings of group interactions. We investigate the efficiency of different machine learning methods to identify emergent leaders in a meeting environment using nonverbal features. *https://pavis.iit.it/projects/leadership*

September 2011 – September 2013
Project Name: Fish4Knowledge
Role: PhD student (The University of Edinburgh)
Funding Body: European Union Seventh Framework Programme (GA No. 257024)
Number of partners: 4
Short Description: Fish4Knowledge focuses on innovative computer vision techniques to address research questions in marine ecology. These techniques automatically extract information about the observed fish. Within the project, 1.4 billion individual fish instances were detected, tracked, and classified in terms of their species by analyzing 524 thousand unique videos. The fish trajectories were also used to study fish behavior. *https://homepages.inf.ed.ac.uk/rbf/Fish4Knowledge/*

September 2009 – December 2010
Project Name: Abandoned-Object Detection System Using Thermal and Visible Band Video Cameras
Role: Collaborator (Middle East Technical University Computer Vision and Remote Sensing Research Group *https://ii.metu.edu.tr/metu-computer-vision-and-remote-sensing-research-group*)
Funding Body: Middle East Technical University Scientific Research Projects Funding Body
Short Description: Timely detection of packages that are left unattended in public spaces is a security concern, and rapid detection is important for prevention of potential threats. This project proposes an automated system processing on thermal and RGB videos for abandoned object detection that aids surveillance operators in indoor environments. *https://blog.metu.edu.tr/atemizel/projects/*

September 2009 – September 2011
Project Name: Probabilistic Modelling of miRNA mRNA Duplexes
Role: Research Assistant (Baskent University)
Funding Body: The Scientific and Technological Research Council of Turkey (Tubitak), Grant No. 110E160
Short Description: To understand the effect of individual miRNAs, it is required to place miRNAs in the overall network of gene regulation and to discover the system level role of miRNAs. One key step in this effort is the identification of target genes of individual miRNAs. This project aimed to develop machine learning techniques

to predict miRNA target genes using dimer and trimer frequency features extracted from putative miRNA-mRNA duplex. *http://www.hasanogul.com/projects.html*

AWARDS AND DISTINCTIONS

- **ELLIS (European Laboratory for Learning and Intelligent Systems) Membership** (20/06/2022) *https://ellis.eu/members*

- **Outstanding Reviewer Award** at IEEE Int. Conference on Computer Vision and Pattern Recognition (CVPR), 2022. *https://cvpr2022.thecvf.com/outstanding-reviewers*

- The **winner** of the **Researcher Type A**: Temporary Assistant Professor (*Ricercatore a tempo determinato legge 240/10 art.24-a*) selection in University of Trento, Department of Information Engineering and Computer Science *https://www.unitn.it/ateneo/bando-dr-valcomp/64256/valutazione-comparativa-a-n-1-posto-di-ricercatore-post-doc-art-24-co-3-lett-a-l-2402010 settore-c*

- **Associate Fellow of the United Kingdom Higher Education Academy** in recognition of attainment against the UK Professional Standards Framework for teaching and learning support in higher education (18/11/2014). *http://www.heacademy.ac.uk/*

- **Edinburgh Global Overseas Research Scholarship,** University of Edinburgh, Edinburgh, United Kingdom (01/09/2011 - 31/08/2014).

- **Principal Career Development Scholarship,** University of Edinburgh, Edinburgh, United Kingdom (01/09/2011 - 31/08/2014).

- **Best Thesis Award** for Master of Science Thesis, awarded by Prof. Dr. Mustafa N. Parlar Education and Research Foundation, Middle East Technical University (METU), Ankara, Turkey, Thesis of the year award, 2011. *https://parlar.org.tr/*

- **2010-2011 Academic year Best Thesis Award** for Master of Science Thesis, awarded by Middle East Technical University to Postgraduate Thesis (i.e., Master of Science and PhD.) including all institutes. *https://ii.metu.edu.tr/graduate-awards*

- **Alper Atalay Best Student Paper Award, first place**
At 19th IEEE Conference on Signal Processing and Communications Applications, April 2011. *http://vpa.sabanciuniv.edu/links/bupam/alper/odul.htm*

- **SPIE Student Travel Grant**, SPIE Defense, Security, and Sensing Symposium, April 2011.

- **2007-2008 Academic Year Baskent University Academic Achievement Scholarship,** High Honour (GPA: 3.72/4.00)

- **2006-2007 Academic Year Baskent University Academic Achievement Scholarship,** High Honour (GPA: 3.73/4.00)

SCIENTIFIC ACTIVITIES

Associate Editor (1)

• *ICES Journal of Marine Science* (from 18 September 2018 **–** Ongoing):
ICES JMS holds the impact factor of 3.593, 5-year impact factor of 4.037, it was ranked as 15th out of 100 Marine and Fresh Water Biology Journals. Cigdem Beyan is handling the papers, which cover the area of applications of computer vision and machine learning in marine science. *https://academic.oup.com/icesjms/pages/Editorial_Board*

• Additionally, together with Dr. Howard I. Browman (fishlarvae.org, Norway), Cigdem Beyan was motivated, developed and edited a *Special Issue* in *ICES Journal of Marine Science* from March 2019 to August 2020. This theme set is called: Applications of machine learning and artificial intelligence in marine science.
https://academic.oup.com/icesjms/article/77/4/1267/5873749

Guest Editor (1)

• *Frontiers in Robotics and AI* (2018-2020):
Motivated, developed and edited research topic: Computational Approaches for Human-Human and Human-Robot Social Interactions, together with Prof. Vittorio Murino (IIT PAVIS, Italy, Uni. Of Verona, Italy, Huawei Technologies, Ireland), Dr. Gentiane Venture (Tokyo Uni. of Agriculture and Technology, Japan) and Dr. Agnieszka Wykowska (IIT S4HRI, Italy). *https://www.frontiersin.org/research-topics/8447/computational-approaches-for-human-human-and-human-robot-social-interactions*

Workshop (Co-)organizer (3)

• ***Main Organizer*** *of Workshop on Social and Cognitive Interactions for Assistive Robotics (SCIAR) to be* held in conjunction with 2022 IEEE/RSI International Conference on Intelligent Robots and Systems (IROS 2022), Kyoto, Japan.
Co-organizers: Yiming Wang (Fondazione Bruno Kessler, Italy), Fei Chen (The Chinese University of Hong Kong, Hong Kong SAR), Séverin Lemaignan (PAL Robotics, Spain), Elisa Ricci (University of Trento, Fondazione Bruno Kessler, Italy)
S*ponsored* by EU Horizon 2020 Spring project and PAL Robotics.
Endorsed by four IEEE RAS Technical Committees: Cognitive Robotics, Robot Learning, Neuro-Robotics Systems, and Human Robot Interaction and Coordination.
https://sciar-workshop.github.io/

• ***Co-organizer*** *of 2nd Workshop on Applications of Egocentric Vision (EgoApp),* held in conjunction with International Conference on Pattern Recognition (ICPR) 2020, Milan, Italy, together with Maya Aghaei (NHL Stenden University, The Netherlands), Fernando De la Torre (Facebook Research, USA), Vittorio Murino (Huawei Technologies, Ireland), Lorenzo Natale (IIT Humanoid Sensing and Perception, Italy) and Alessio Del Bue (IIT PAVIS, Italy). *https://egoappworkshop2020.wordpress.com/*

- **_Co-organizer_** _of Applications of Egocentric Vision Workshop (EgoApp), held_ in conjunction with British Machine Vision Conference (BMVC) 2019, Cardiff, UK, together _with Maya Aghaei (IIT PAVIS, Italy), Fernando De la Torre (Facebook Research, USA) and Vittorio Murino (IIT PAVIS, Italy)._ _https://egoappworkshop.wordpress.com/_

Journal Reviewer (19)

- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Multimedia
- IEEE Transactions on Affective Computing
- IEEE Transactions on Knowledge and Data Engineering
- IEEE Transactions on Cognitive and Developmental Systems
- Pattern Recognition
- Computer Vision and Image Understanding
- Machine Vision and Applications
- Multimedia Systems
- IEEE Access
- PLOS ONE
- IET Image Processing
- Expert Systems with Applications
- EURASIP Journal on Image and Video Processing
- ICES Journal of Marine Science
- Frontiers Psychology
- Electronics Letters
- IEEE Robotics and Automation Letters
- Encyclopedia of Image Processing

Conference Area Chair (3)

- The British Machine Vision Conference (BMVC) 2022
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- ACM International Conference on Multimodal Interaction (ICMI) 2022
https://icmi.acm.org/2022/people/
- The British Machine Vision Conference (BMVC) 2021
https://www.bmvc2021-virtualconference.com/people/area-chairs/

International Conference Program Committee Member (5)

- ACM International Conference on Multimedia (ACMMM) 2019, 2020, 2021
- ACM International Conference on Multimodal Interaction (ICMI) 2019, 2020, 2021
- International Conference on Human Computer Interaction Theory and Applications (HUCAPP) 2019, 2020, 2021, 2022
HUCAPP is a part of VISIGRAPP (Int. Joint Conf. on Computer Vision, Imaging and Computer Graphics Theory and Applications)

• Doctoral Consortium of the Int. Conf. on Affective Computing and Intelligent Interaction (ACII) 2019

• International Workshop on Corpora And Tools for Social skills annotation @ICMI2021
https://sites.google.com/view/cats2021workshop/home

International Conference / Workshop Reviewer (15)

• Conference on Neural Information Processing Systems (NeurIPS) 2022
• Computer Vision and Pattern Recognition (CVPR) 2022
• European Conference on Computer Vision (ECCV) 2020
• ACM International Conference on Multimedia (ACMMM) 2019, 2020, 2021, 2022
• International Conference on Machine Learning (ICML) 2022
• International Conference on Learning Representations (ICLR) 2022
• IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2022
• ACM International Conference on Multimodal Interaction (ICMI) 2019, 2020, 2021
• Winter Conference on Applications of Computer Vision (WACV) 2021, 2023
• International Conference on Pattern Recognition (ICPR) 2014, 2016, 2018, 2020
• International Conference on Affective Computing and Intelligent Interaction (ACII) 2019, 2021
• International Conference on Image Analysis and Processing (ICIAP) 2021
• International Conference on Motion and Computing (MOCO) 2018, 2020
• ECCV Workshop on Multimodal Learning and Applications (MULA) 2018
• ICCV Workshop on Action Recognition with a Large Number of Classes (THUMOS) 2013

Invited Speaker (2)

• *Title:* Investigation of Social Interactions through Visual Data Analysis
In Department of Information Engineering and Computer Science, University of Trento, Trento, Italy, 14 October 2020.

• *Title:* Social Signal Processing Approaches for Emergent Leadership
In Department of Multimedia Informatics, Graduate School of Informatics,
Middle East Technical University, Ankara, Turkey, 27 December 2017.
https://ii.metu.edu.tr/announcement/social-signal-processing-approaches-dr-cigdem-beyan

Invited Session Chair (1)

• Social *Signal Processing Breakout Discussion Session* at ACM International Conference on Multimodal Interaction (ICMI) 2020. *https://twitter.com/AcmIcmi/status/1321089713629966340*

SUPERVISION EXPERIENCE

2021 – Ongoing
Martina Rama (University of Trento)
Role: Internship Supervisor & Master Thesis Co-supervisor (Supervisor: Prof. Elisa Ricci)
Topic: Social Group Detection in Human-Robot Interaction Scenarios

2021 – 2022
Francesco Tonini (University of Trento)
Role: Internship Supervisor & Master Thesis Co-supervisor (Supervisor: Prof. Elisa Ricci)
Thesis Title: I Know Where You Are Looking At: Detecting People's Gaze With A
Multimodal Approach *https://webapps.unitn.it/du/it/Persona/PER0233089/Tesi*

2020 – Ongoing
Sanket Kumar Thakur (IIT)
Role: PhD Thesis Co-supervisor (Supervisor: Dr. Alessio Del Bue)
PhD Topic: (Inter-)action Analysis in Ego-centric Scenes

2019 – Ongoing
Giancarlo Paoletti (IIT)
Role: PhD Thesis Co-supervisor (Supervisor: Dr. Alessio Del Bue)
PhD Topic: Unsupervised Feature Learning for Human Action Recognition

2017 – 2020
Muhammad Shahid (IIT)
Role: PhD Thesis Co-supervisor (Supervisor: Prof. Vittorio Murino)
PhD Thesis Title: Social Interactions Analysis through Deep Visual Nonverbal Features
https://iris.unige.it/handle/11567/1040976

2015 – 2018
Nicolò Carissimi (IIT)
Role: PhD Thesis Co-supervisor (Supervisor: Prof. Vittorio Murino)
PhD Thesis Title: Investigating Social Interactions Using Multi-Modal Nonverbal Features
https://iris.unige.it/handle/11567/940931

TEACHING EXPERIENCE (*in Italy, United Kingdom and Turkey*)

February 2022 – May 2022
Course Name: Introduction to Machine Learning
Role: Lecturer (*Docente & co-titolare del corso*) in University of Trento, Trento, Italy
CFU: 6
24 hours *face-to-face* teaching
Level: Master of Science (*Laurea in Magistrale*)
Language: English
# of Registered Students: 61
*https://www.esse3.unitn.it/Guide/PaginaADErogata.do?ad_er_id=2021*N0*N0*S2*53694*93492&ANNO_ACCA DEMICO=2021&codice_docente=77997&mostra_percorsi=S*

February 2022 – March 2022
Course Name: Multimodal Machine Learning
Role: Lecturer (*Docente & co-titolare del corso*) in The University of Trento, Trento, Italy
CFU: 3
10 hours *online* teaching
Level: PhD
Language: English
# of Registered Students: 52
https://iecs.unitn.it/node/1165

February 24 – 25 2022
Course Name: Human Behavior Analysis with a Social Signal Processing Perspective
Role: Lecturer (*Docente & co-titolare del corso*) in International AI Doctoral Academy (AIDA)
https://www.i-aida.org/
4 hours *online* teaching
Level: PhD and higher (e.g., postdoc)
Language: English
# of Registered Students: 104
https://groups.google.com/g/ML-news/c/bocXW7KndFg
https://www.i-aida.org/course/human-behavior-analysis-with-a-social-signal-processing-perspective/

September 2011 – June 2014
Tutor, Lab. Demonstrator, Teaching Assistant, Marker and Guest Lecturer in the *University of Edinburgh, School of Informatics, Edinburgh, UK*. All courses were delivered in *English*.

- 13/01/2014 - 23/05/2014 Tutor (16 hours) and Marker (25 hours) in INF-1-DA: Informatics 1 - Data and Analysis course, given to 1st year Bachelor of Science students.
http://www.drps.ed.ac.uk/13-14/dpt/cxinfr08015.htm

- 13/01/2014 - 23/05/2014 Guest Lecturer (2 hours) and Tutor + Marker (33 hours) in Advanced Vision course, given to 4th year Bachelor of Science and Master of Science students. *http://www.drps.ed.ac.uk/13-14/dpt/cxinfr11031.htm*

- 09/09/2013 - 20/12/2013 Tutor (24 hours) and Marker (55 hours) in Database Systems course, given to 3rd year Bachelor of Science students. *http://www.drps.ed.ac.uk/15-16/dpt/cxinfr10055.htm*

- 14/01/2013 - 24/05/2013 Tutor + Marker (33 hours) in Advanced Vision course, given to 4th year Bachelor of Science and Master of science students. *http://www.drps.ed.ac.uk/13-14/dpt/cxinfr11031.htm*

- 09/01/2013 - 18/05/2013 Tutor (16 hours) and Marker (25 hours) in INF-1-DA: Informatics 1 - Data and Analysis course, given to 1st year Bachelor of Science students. *http://www.drps.ed.ac.uk/13-14/dpt/cxinfr08015.htm*

- 10/09/2012 - 21/12/2012 Tutor (8 hours) in Introductory Applied Machine Learning course, given to 3rd year Bachelor of Science students. *http://www-test.drps.ed.ac.uk/16-17/dpt/cxinfr10069.htm*

- 10/09/2012 - 21/12/2012 Teaching Assistant (36 hours) in INF-1-CP: Computer Programming: Skills and Concepts course, given to 1st year Bachelor of Science students. *http://www.drps.ed.ac.uk/11-12/dpt/cxinfr08022.htm*

- 10/01/2012 - 20/05/2012 Tutor (16 hours) and Marker (25 hours) in INF-1-DA: Informatics 1 - Data and Analysis course, given to 1st year Bachelor of Science students. *http://www.drps.ed.ac.uk/13-14/dpt/cxinfr08015.htm*

- 12/09/2011 - 21/12/2011 Tutor (8 hours) in Introductory Applied Machine Learning course, given to 3rd year Bachelor of Science students. *http://www.drps.ed.ac.uk/21-22/dpt/cxinfr10069.htm*

- 12/09/2011 - 21/12/2011 Demonstrator (20 hours) and Teaching Assistant (42 hours) in INF-1-CP: Computer Programming: Skills and Concepts course, given to 1st year Bachelor of Science students. *http://www.drps.ed.ac.uk/11-12/dpt/cxinfr08022.htm*

September 2008 – September 2011

Teaching Assistant *(is the person who conduct face-to-face lecturing to solve programming exercises in computer laboratory or giving tutorials in the classroom, at the same time, she/he is the person who is responsible to evaluate the course assignments, short-exams, and midterm exams)* in Baskent University, Department of Computer Engineering, Ankara, Turkey. All courses were delivered in Turkish.

- 07/02/2011 - 13/05/2011 BIL344 Database Systems given to 3rd year Bachelor of Science students, 14 hours. http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501344

- 20/09/2010 - 24/12/2010 BIL429 Computer Networks, given to 4th year Bachelor of Science students, 14 hours. http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501499

- 20/09/2010 - 24/12/2010 BIL464 Multimedia Systems, given to 4th year Bachelor of Science students, 14 hours. http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501489

- 08/02/2010 - 14/05/2010 BIL218 Computer Organization, given to 2nd year Bachelor of Science students, 14 hours.
  http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501218

- 08/02/2010 - 14/05/2010 BIL344 Database Systems, given to 3rd year Bachelor of Science students, 14 hours.
  http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501344

- 21/09/2009 - 25/12/2009 BIL429 Computer Networks, given to 4th year Bachelor of Science students, 14 hours.
  http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501499

- 09/02/2009 - 15/05/2009 BIL240 Programming Languages, given to 2nd year Bachelor of Science students, 14 hours.
  http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501240

- 09/02/2009 - 15/05/2009 BIL364 Automata Theory, given to 3rd year Bachelor of Science students, 14 hours.
  http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501328

- 09/02/2009 - 15/05/2009 BIL106 Programming Laboratory 2 (Programming with C), given to 1st year Bachelor of Science students, 28 hours.

- 22/09/2008 - 26/12/2008 BIL231 Discrete Structures, given to 2nd year Bachelor of Science students, 14 hours.
  http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501231

- 22/09/2008 - 26/12/2008 BIL105 Programming Laboratory 1 (Programming with C), given to 1st year Bachelor of Science students, 28 hours.
  http://truva.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501105

MEMBERSHIPS

- ELLIS (European Laboratory for Learning and Intelligent Systems) Membership (20/06/2022) https://ellis.eu/members
- Association for Computing Machinery (ACM) Professional Membership (2018 – Ongoing)
- Associate Fellow of the UK Higher Education Academy (2014 – Ongoing)
- Institute of Electrical and Electronics Engineers (IEEE) (2013 – Ongoing)
- The British Machine Vision Association (BMVA) Student Membership (2011– 2014)

VOLUNTEER WORK

23-27 July 2018
Academic volunteer in DeepLearn 2018: International Summer School on Deep Learning, Genoa, Italy
Welcoming the keynote speakers, management of the meeting rooms and technical support.
Interaction with participants from more than 80 countries, for a total of 72 hours of activities.

November 2011- July 2014
Turkish teacher for children and adults in Speak Turkish Edinburgh, a registered charity (SC043391) dedicated to fostering a wider understanding of Turkish language and culture in Edinburgh, Scotland, UK.
This duty covered various levels of classes such as age of 10-18 and adults.

October 2014- April 2015
President of University of Edinburgh Turkish Society

April 2014- October 2014

Secretary of University of Edinburgh Turkish Society
Actively worked on establishment (February 2014) of the society.

2008
Yearbook Preparation Community Department Coordinator
Baskent University Faculty of Engineering
Department Of Computer Engineering

2007
Baskent University Computer Society Secretary of Administrative Body

PUBLICATION LIST

SCOPUS
Citations: 512, h-index: 14, access on 13.07.2022
44 co-authors from different institutions and countries, e.g., UK, Italy, Norway, Netherlands, Turkey, Japan, Taiwan, China.
https://www.scopus.com/authid/detail.uri?authorId=43260919000

Google Scholar
Citations: 837, h-index: 14, i10-index: 21, access on 13.07.2022
https://scholar.google.com/citations?user=VmjUxckAAAAJ&hl=en

Peer Reviewed Book Chapters (3)

[B03]	**C. Beyan**, "Unusual Trajectory Detection: Advances", In Encyclopedia of Image Processing, 1st Edition, Phillip A. Laplante (Editor), Taylor & Francis Group: New York, pp: 766-781. doi: 10.1201/9781351110273-140000116
[B02]	**C. Beyan**, "Fish Behavior Analysis", In Fish4Knowledge: Collecting and Analyzing Massive Coral Reef Fish Video Data, Chen-Burger et al. (Editors), Springer. doi: 10.1007/978-3-319-30208-9
[B01]	**C. Beyan**, and R. B. Fisher, "Hierarchal Decomposition for Unusual Fish Trajectory Detection", In Computer Vision and Pattern Recognition in Environmental Informatics, Zhou et al. (Editors), IGI Global. doi: 10.4018/978-1-4666-9435-4.ch001

Peer Reviewed Journal Papers (17)

[J17]	**C. Beyan,** S. Karumuri, G. Volpe, A. Camurri, and R. Niewiadomski, "Modeling Multiple Temporal Scales of Full-body Movements for Emotion Classification", IEEE Transactions on Affective Computing, Early Access 2021. doi: 10.1109/TAFFC.2021.3095425
[J16]	**C. Beyan***, M. Shahid* and V. Murino, " RealVAD: A Real-world Dataset for Voice Activity Detection", IEEE Transactions on Multimedia, in IEEE Transactions on Multimedia, vol. 23, pp. 2071-2085, 2021. doi: 10.1109/TMM.2020.3007350 *_* indicates equal contribution_

[J15]	**C. Beyan**, A. Zunino, M. Shahid and V. Murino, "Personality Traits Classification Using Deep Visual Activity-based Nonverbal Features of Key-Dynamic Images", IEEE Transactions on Affective Computing, vol. 12, no. 4, pp. 1084-1099, 2021. doi: 10.1109/TAFFC.2019.2944614
[J14]	**C. Beyan**, and H. I. Browman, "Setting the stage for the machine intelligence era in marine science", ICES Journal of Marine Science, vol. 77, no. 4, pp. 1267–1273, June 2020. doi: 10.1093/icesjms/fsaa084
[J13]	**C. Beyan**, V. Murino, G. Venture and A. Wykowska, "Editorial: Computational Approaches for Human-Human and Human-Robot Social Interactions", Frontiers in Robotics and AI, vol. 7, no. 55, 2020. doi: 10.3389/frobt.2020.00055
[IJ12]	F. Capozzi, **C. Beyan**, A. Pierro, A. Koul, V. Murino, S. Livi, A. P. Bayliss, L. Ristic, C. Becchio, "Tracking The Leader: Gaze Behaviour In Group Interactions", ISCIENCE, 16, pp. 242-249, 2019. doi: 10.1016/j.isci.2019.05.035
[IJ11]	**C. Beyan**, V. M. Katsageorgiou, V. Murino, "A Sequential Data Analysis Approach to Detect Emergent Leaders in Small Groups", IEEE Transactions on Multimedia, vol. 21, no. 8, pp. 2107-2116, 2019. doi: 10.1109/TMM.2019.2895505
[IJ10]	**C. Beyan**, V. M. Katsageorgiou, R. Fisher, "Extracting Statistically Significant Behaviour from Fish Tracking Data With and Without Large Dataset Cleaning", IET Computer Vision, vol. 12, no. 2. pp. 162-170, 2018. doi: 10.1049/iet-cvi.2016.0462
[IJ09]	**C. Beyan**, F. Capozzi, C. Becchio, and V. Murino, "Prediction of the Leadership Style of an Emergent Leader Using Audio and Visual Nonverbal Features", IEEE Transactions on Multimedia, vol. 20, no. 2, pp. 441-456, 2018. doi: 10.1109/TMM.2017.2740062
[IJ08]	**C. Beyan**, B. Boom, J. Liefhebber, K-T Shao, and R. Fisher, "Natural Swimming Speed of Dascyllus reticulatus Increases with Water Temperature", ICES Journal of Marine Science, vol. 72, no. 8, pp. 2506-2511, 2015. doi: 10.1093/icesjms/fsv104
[IJ07]	**C. Beyan**, R. Fisher, "Classifying Imbalanced Data Sets Using Similarity Based Hierarchical Decomposition", Pattern Recognition, vol. 48, no. 5, pp. 1653-1672, 2015. doi: 10.1016/j.patcog.2014.10.032

[IJ06]	**C. Beyan**, A. Temizel, "A Multimodal Approach for Individual Tracking of People and Their Belongings", Imaging Science Journal, vol. 63, no. 4, pp. 192-202, 2015. doi: 10.1179/1743131X14Y.0000000101
[IJ05]	S. McDonagh, **C. Beyan**, P. X. Huang and R. B. Fisher, "Applying semi-synchronised task farming to large-scale computer vision problems", International Journal of High Performance Computing Applications, vol. 29. no. 4, pp. 437-460, 2015. doi: 10.1177/1094342014532965
[IJ04]	B. J. Boom, J. He, S. Palazzo, P. X. Huang, **C. Beyan**, H. Chou, F. Lin, C. Spampinato, R. B. Fisher, "A research tool for long-term and continuous analysis of fish assemblage in coral-reefs using underwater camera footage", Ecological Informatics, vol. 23, pp. 83-97, 2014. doi: 10.1016/j.ecoinf.2013.10.006
[IJ03]	C. Spampinato, E. Beauxis-Aussalet, S. Palazzo, **C. Beyan**, J. van Ossenbruggen, J. He, B. Boom, X. Huang, "A rule-based event detection system for real-life underwater domain", Machine Vision and Applications, vol. 25, no. 1, pp. 99-117, 2014. doi: 10.1007/s00138-013-0509-x
[IJ02]	**C. Beyan**, A.Temizel, "Adaptive Mean-Shift for Automated Multi Object Tracking", IET Computer Vision, vol. 6, no.1, pp. 1-12, 2012. doi: 10.1049/iet-cvi.2011.0054
[IJ01]	**C. Beyan**, A.Yigit, A.Temizel, "Fusion of Thermal and Visible Band Video for Abandoned Object Detection", Journal of Electronic Imaging, vol. 20, no. 3, pp. 1-13, 2011. doi: 10.1117/1.3602204

Peer Reviewed International Conference (18) & Workshop Papers (5)

[IC23]	R. Franceschini, E. Fini, **C. Beyan**, A. Conti, F. Arrigoni, E. Ricci, "Multimodal Emotion Recognition with Modality-Pairwise Unsupervised Contrastive Loss", ACCEPTED to 26st International Conference on Pattern Recognition (ICPR), 2022. *(Oral presentation) (GII-GRIN-SCIE Conf. Rating: A-)*

[IC22]	G. Paoletti, J. Cavazza, **C. Beyan**, A. Del Bue, "Unsupervised Human Action Recognition with Skeletal Graph Laplacian and Self-Supervised Viewpoints Invariance". In Proceedings of the 32nd The British Machine Vision Conference (BMVC), 2021. url: https://www.bmvc2021-virtualconference.com/assets/papers/0842.pdf *(Oral presentation) (GII-GRIN-SCIE Conf. Rating: A)*
[IC21]	S. K. Thakur, **C. Beyan**, P. Morerio, and A. Del Bue, "Predicting Gaze from Egocentric Social Interaction Videos and IMU Data", In Proceedings of ACM International Conference on Multimodal Interaction (ACM ICMI), pp. 717–722, 2021. doi: 10.1145/3462244.3479954 *(37.5% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A-)*
[IC20]	M. Shahid, **C. Beyan**, V. Murino, "S-VVAD: Visual Voice Activity Detection by Motion Segmentation", In Proceedings of IEEE Winter Conference on Applications of Computer Vision (WACV), pp. 23332-2341, 2021. doi: 10.1109/WACV48630.2021.00238 *(GII-GRIN-SCIE Conf. Rating: A)*
[IC19]	**C. Beyan**, M. Bustreo, M. Shahid, G. L. Bailo, N. Carissimi, A. Del Bue, "Analysis of Face-Touching Behavior in Large Scale Social Interaction Dataset". In Proceedings of ACM International Conference on Multimodal Interaction (ACM ICMI), pp. 24-32, 2020. doi: 10.1145/3382507.3418876 *(37.5% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A-)*
[IC18]	G. Paoletti, J. Cavazza, **C. Beyan**, A. Del Bue, "Subspace Clustering for Action Recognition with Covariance Representations and Temporal Pruning". In Proceedings of International Conference on Pattern Recognition (ICPR), pp. 6035-6042, 2020. doi: 10.1109/ICPR48806.2021.9412060 *(Accepted in first review round, which has 35.6% acceptance rate,* *Overall acceptance rate=43.4%,* *Oral presentation; overall oral presentation acceptance rate=4.4%)* *(GII-GRIN-SCIE Conf. Rating: A-)*
[IC17]	M. Shahid*, **C. Beyan***, V. Murino, "Voice Activity Detection by Upper Body Motion Analysis and Unsupervised Domain Adaptation". In Proceedings of International Conference on Computer Vision (ICCV) Workshops, (10th International Workshop on Human Behavior Understanding (HBU)), 2019. doi: 10.1109/ICCVW.2019.00159 ** indicates equal contribution*

[IC16]	M. Shahid*, **C. Beyan***, V. Murino, "Comparisons of Visual Activity Primitives for Voice Activity Detection". In Proceedings of Image Analysis and Processing (ICIAP), Lecture Notes in Computer Science, vol. 11751, E. Ricci, S. Rota Bulo, C. Snoek, O. Lanz, S. Messelodi, N. Sebe (eds), Springer, Cham, pp. 48-59, 2019. doi: 10.1007/978-3-030-30642-7_5 *(~56% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: B)* ** indicates equal contribution*
[IC15]	N. Carissimi, P. Rota, **C. Beyan**, V. Murino, "Filling the Gaps: Predicting Missing Joints of Human Poses Using Denoising Autoencoders", In Proceedings of European Conference on Computer Vision (ECCV) Workshops, (9th International Workshop on Human Behavior Understanding (HBU)), pp. 364-379, 2018. doi: 10.1007/978-3-030-11012-3_29 *(Oral Presentation)*
[IC14]	**C. Beyan**, M. Shahid and V. Murino, "Investigation of Small Group Social Interactions Using Deep Visual Activity-Based Nonverbal Features", In Proceedings of 26th ACM Multimedia (ACMMM), pp. 311-319, 2018. doi: 10.1145/3240508.3240685 *(~27.5% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A++)*
[IC13]	N. Carissimi, **C. Beyan**, and V. Murino, "A Multi-View Learning Approach to Deception Detection", In Proceedings of 13th IEEE International Conference on Automatic Face and Gesture Recognition (IEEE FG), pp. 599-606, 2018. doi: 10.1109/FG.2018.00095 *(~47% overall acceptance rate, Oral Presentation)* *(GII-GRIN-SCIE Conf. Rating: A-)*
[IC12]	**C. Beyan**, F. Capozzi, C. Becchio, and V. Murino, "Multi-task Learning of Social Psychology Assessments and Nonverbal Features for Automatic Leadership Identification", In Proceedings of ACM International Conference on Multimodal Interaction (ACM ICMI), pp. 451-455, 2017. doi: 10.1145/3136755.3136812 *(~43% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A-)*
[IC11]	**C. Beyan**, V. M. Katsageorgiou, and V. Murino, "Moving as a Leader: Detecting Emergent Leadership in Small Groups using Body Pose", In Proceedings of 25th ACM Multimedia (ACMMM), pp. 1425-1433, 2017. doi: 10.1145/3123266.3123404 *(~28% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A++)*

[IC10]	**C. Beyan**, F. Capozzi, C. Becchio, and V. Murino, "Identification of Emergent Leaders in a Meeting Scenario Using Multiple Kernel Learning", In Proceedings of International 2nd Workshop on Advancements in Social Signal Processing for Multimodal Interaction (ASSP4MI), in conjunction with ACM International Conference on Multimodal Interaction (ACM ICMI), pp. 3-10, 2016. doi: 10.1145/3005467.3005469
[IC09]	**C. Beyan**, N. Carissimi, F. Capozzi, S. Vascon, M. Bustreo, A. Pierro, C. Becchio, and V. Murino, "Detecting emergent leader in a meeting environment using nonverbal visual features only", In Proceedings of ACM International Conference on Multimodal Interaction (ACM ICMI), pp. 317-324, 2016. doi: 10.1145/2993148.2993175 *(~38% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A-)*
[IC08]	**C. Beyan**, R. B. Fisher, "Detection of Abnormal Fish Trajectories Using a Clustering Based Hierarchical Classifier", In Proceedings of British Machine Vision Conference (BMVC), pp. 1-11, 2013. doi: 10.5244/C.27.21 *(~30% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A)*
[IC07]	**C. Beyan**, R. B. Fisher, "Detecting abnormal fish trajectories using clustered and labeled data", In Proceedings of 20th IEEE International Conference on Image Processing (IEEE ICIP), pp. 1476-1480, 2013. doi: 10.1109/ICIP.2013.6738303 *(~44.5% overall acceptance rate, Oral presentation)* *(GII-GRIN-SCIE Conf. Rating: A-)*
[IC06]	**C. Beyan**, R. B. Fisher, "A Filtering Mechanism for Normal Fish Trajectories", In Proceedings of the 21st International Conference on Pattern Recognition (ICPR), pp. 2286-2289, 2012. *(~48.5% overall acceptance rate) (GII-GRIN-SCIE Conf. Rating: A-)*
[IC05]	B. J. Boom, P. X. Huang, **C. Beyan**, C. Spampinato, S. Palazzo, J. He, E. Beauxis-Aussalet, S.-I. Lin, H.-M. Chou, G. Nadarajan, Y.-H. Chen-Burger, J. van Ossenbruggen, D. Giordano, L. Hardman, F.-P. Lin, R. B. Fisher, "Long-term underwater camera surveillance for monitoring and analysis of fish populations", International Workshop on Visual Observation and Analysis of Animal and Insect Behavior (VAIB), in conjunction with the 21st International Conference on Pattern Recognition, 2012. *(Oral Presentation)*

[IC04]	S. Palazzo, C. Spampinato, **C. Beyan**, "Event Detection in Underwater Domain by Exploiting Fish Trajectory Clustering", In Proceedings of the 1st ACM international workshop on Multimedia analysis for ecological data (MAED), in conjunction with ACM Multimedia (ACMMM), pp. 31-36, 2012. doi: 10.1145/2390832.2390840 *(Oral Presentation)*
[IC03]	**C. Beyan**, A. Temizel, "Mean-Shift Tracking for Surveillance Applications Using Thermal and Visible Band Data Fusion", In Proceedings of SPIE Vol. 8020, 802010, Defense, Security and Sensing: Airborne Intelligence, Surveillance, Reconnaissance (ISR) Systems and Applications VIII, pp. 1-13, 2011. doi: 10.1117/12.882838
[IC02]	H. Ogul, **C. Beyan**, O. Eren, K. Yildiz, T. Ercelebi, B. Sonmez, "MicroRNA target recognition from compositional features of aligned microRNA-mRNA duplexes", In Proceedings of International Symposium on Innovations in Intelligent Systems and Applications (INISTA), 2010. *(Oral Presentation)*
[IC01]	**C. Beyan**, H. Ogul, "A fuzzy k-NN approach for cancer diagnosis with microarray gene expression data", In Proceedings of 3rd International Symposium on Health Informatics and Bioinformatics (HIBIT), 2008. *(Oral Presentation)*

GII-GRIN-SCIE Conf. Ratings are taken from https://scie.lcc.uma.es:8443/ratingSearch.jsf

Peer Reviewed Conference Papers in Turkish (2)

[NC02]	**Ç. Beyan**, A. Temizel, "Detection of Abandoned Objects Using Thermal and Visible Band Tracking", In Proceedings of 19th IEEE Conference on Signal Processing and Communications Applications (IEEE SIU), pp. 114-117, 2011. doi: 10.1109/SIU.2011.5929600 *(ORAL Presentation)* **(Received Alper Atalay Best Student Paper Award, first place)**
[NC01]	**Ç. Beyan**, A. Temizel, "A Hybrid Multi Object Tracker Using Mean-shift and Background Subtraction", In Proceedings of 19th IEEE Conference on Signal Processing and Communications Applications (IEEE SIU), pp. 110-113, 2011. doi: 10.1109/SIU.2011.5929599

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