

CIGDEM BEYAN

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EDUCATION

2015 PhD.

University of Edinburgh, UK

School of Informatics

Institute of Perception, Action and Behaviour (IPAB)

Thesis Title: Detection of Unusual Fish Trajectories from Underwater Videos

First Supervisor: Prof. Dr. Robert Fisher

Second Supervisor: Dr. Vittorio Ferrari

2010 MSc.

Middle East Technical University (METU), 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. Dr. Alptekin Temizel

2008 BEng.

Baskent University, 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. Dr. Hasan Ogul

CURRENT WORK POSITION

March 2021-

Assistant Professor

Department of Information Engineering and Computer Science (DISI)
University of Trento (UNITN), Trento, Italy

PREVIOUS WORK POSITIONS

September 2015- March 2021

Postdoctoral Researcher

Department of Pattern Analysis & Computer Vision (PAVIS)
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 for preparing practical assignments for Introduction to Vision and Robotics <http://www.inf.ed.ac.uk/teaching/courses/ivr/>

University of Edinburgh
School of Informatics
Edinburgh, UK

September 2011- May 2015

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

June 2007

Intern

Meteksan System Corporate Resolution and Software Development
Ankara, Turkey

June 2006

Intern

Siemens Business
Ankara, Turkey

RESEARCH INTEREST

- Multimodal Analysis of Nonverbal Social Interactions & Social Signal Processing (e.g., Leadership Identification, Personality Trait Analysis, Deception Detection, Affect Classification, etc.)
- Computer Vision & Multimedia (e.g., human/animal behaviour understanding, action recognition, trajectory analysis, anomaly detection, active speaker detection, etc.)
- Machine & Deep Learning (e.g., classification of imbalanced data, active learning, unsupervised learning, domain adaptation, self-supervision, representation learning, etc.)

RESEARCH PROJECTS*

September 2019- December 2020

Multimodal Nonverbal Behavior Analysis of Public Speakers

Collaboration with: Omer Sumer (Uni. of Tübingen, Germany), Prof. Dr. Ulrich Trautwein (Uni. of Tübingen, Germany) and Prof. Dr. Enkelejda Kasneci (Uni. of Tübingen, Germany)

September 2015- September 2019

Multimodal Identification of Emergent Leaders in Small Group Social Interactions
<https://www.iit.it/datasets/leadership-corpus-dataset>

Collaboration with: Dr. Francesca Capozzi (McGill University, Canada), Prof. Dr. Cristina Becchio (IIT C'MON, Uni. of Turin, Italy), and Prof. Dr. Vittorio Murino (IIT PAVIS, Italy)

September 2011- May 2015

Fish4Knowledge (EU 7th Framework Programme [FP7/2007-2013] under grant agreement 257024, 2011-2013)

Behaviour analysis of fish in live undersea video recordings (a part of PhD. Thesis)
<http://groups.inf.ed.ac.uk/f4k/>

Collaboration with: Dr. Bastiaan J. Boom (Uni. of Edinburgh, UK), Dr. Simone Palazzo (Uni. of Catania, Italy), Dr. Concetto Spampinato (Uni. of Catania, Italy), and Prof. Dr. Robert Fisher (Uni. of Edinburgh, UK)

September 2009- December 2010

METU Scientific Research Project Funding (BAP)
Abandoned-Object Detection System Using Thermal and Visible Band Video Cameras

<https://blog.metu.edu.tr/atemizel/projects/>

METU Computer Vision and Remote Sensing research Group

<https://ii.metu.edu.tr/metu-computer-vision-and-remote-sensing-research-group>

Collaboration with: Dr. Ahmet Yigit (METU, Turkey) and Prof. Dr. Alptekin Temizel (METU, Turkey)

September 2009- September 2011

Probabilistic Modelling of miRNA mRNA Duplexes
Bioinference Research Group

<http://www.baskent.edu.tr/~hogul/research.htm>

Collaboration with: Prof. Dr. Hasan Ogul (Baskent Uni., Turkey)

**PhD., MSc. and BEng. thesis (see section “Education”) as well as PhD co-supervised projects (see section “supervision experience”) are excluded from this section.*

AWARDS AND DISTINCTIONS

- Became **Associate Fellow of the 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/>
- Received **Edinburgh Global Overseas Research Scholarship**
<http://www.ed.ac.uk/schools-departments/student-funding/postgraduate/international/global/research>
- Received **Principal Career Development Scholarship, University of Edinburgh**
<http://www.ed.ac.uk/schools-departments/student-funding/postgraduate/uk-eu/university-scholarships/development>
<https://www.ed.ac.uk/student-funding/postgraduate/scholar-case-studies>
- Received **Best Thesis Award** for MSc. Thesis
Given 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/>
- Received **2010-2011 Academic year Best Thesis Award** for MSc. Thesis
Given by Middle East Technical University to Postgraduate Thesis including all institutes.
<https://ii.metu.edu.tr/graduate-awards>
- Received **Alper Atalay Best Student Paper Award, first place**
19th IEEE Conference on Signal Processing and Communications Applications, April 2011,
<http://vpa.sabanciuniv.edu/links/bupam/alper/odul.htm>
- Received **SPIE Student Travel Grant**, SPIE Defense, Security, and Sensing Symposium, April 2011.
- Received **2007-2008 Academic Year Baskent University Academic Achievement Scholarship**, High Honour (GPA: 3.72/4.00)
- Received **2006-2007 Academic Year Baskent University Academic Achievement Scholarship**, High Honour (GPA: 3.73/4.00)

SCIENTIFIC ACTIVITIES

Associate Editor

- *ICES Journal of Marine Science* (18 September 2018-):
 - Covering area of applications of computer vision and machine learning in marine science. https://academic.oup.com/icesjms/pages/Editorial_Board
 - Motivated, developed and edited article theme set: Applications of machine learning and artificial intelligence in marine science, published on 20.07.2020, (received 850 reads until 04.08.2020), together with Dr. Howard I Browman (fishlarvae.org, Norway).
<https://academic.oup.com/icesjms/article/77/4/1267/5873749>

Guest Editor

- *Frontiers in Robotics and AI* (2018-2020):
 - Motivated, developed and edited research topic: Computational Approaches for Human-Human and Human-Robot Social Interactions (37773 total views and 2171 article downloads accessed on 06.04.2020), together with Prof. Dr. 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

- 2nd *Workshop on Applications of Egocentric Vision (EgoApp)* in conjunction with International Conference on Pattern Recognition (ICPR) 2020, Milan, Italy, together with Maya Aghaei (IIT PAVIS, Italy), 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/>
- *Applications of Egocentric Vision Workshop (EgoApp)* 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 (15)

- IEEE Transactions on Multimedia

- IEEE Transactions on Affective Computing
- IEEE Transactions on Knowledge and Data Engineering
- Pattern Recognition
- Machine Vision and Applications
- 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

International Conference / Workshop Reviewer (9)

- European Conference on Computer Vision (ECCV) 2020
- ACM International Conference on Multimedia (ACMMM) 2019, 2020
- ACM International Conference on Multimodal Interaction (ICMI) 2019, 2020
- Winter Conference on Applications of Computer Vision (WACV) 2021
- International Conference on Pattern Recognition (ICPR) 2014, 2016, 2018, 2020
- International Conference on Affective Computing and Intelligent Interaction (ACII) 2019
- International Conference on Motion and Computing (MOCO) 2018
- ICCV Workshop on Action Recognition with a Large Number of Classes (THUMOS) 2013
- ECCV Workshop on Multimodal Learning and Applications (MULA) 2018

Program Committee Member

- ACM International Conference on Multimedia (ACMMM) 2019, 2020
- ACM International Conference on Multimodal Interaction (ICMI) 2019, 2020
- International Conference on Human Computer Interaction Theory and Applications (HUCAPP) 2019, 2020
HUCAPP is a part of VISIGRAPP (Int. Joint Conf. on Computer Vision, Imaging and Computer Graphics Theory and Applications)
<http://www.hucapp.visigrapp.org/ProgramCommittee.aspx?y=2019>
- Doctoral Consortium of the Int. Conf. on Affective Computing and Intelligent Interaction (ACII) 2019

Invited Speaker

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

Invited Conference Session Moderator

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

SUPERVISION EXPERIENCE

2015- 2018

Nicolò Carissimi

PhD Thesis *co-supervising* together with Prof. Dr. Vittorio Murino

PhD Thesis Title: Investigating Social Interactions Using Multimodal Nonverbal Features

2017-2020

Muhammad Shahid

PhD Thesis *co-supervising* together with Prof. Dr. Vittorio Murino

PhD Topic: Social Interactions Analysis through Deep Visual Nonverbal Features

2019-

Giancarlo Paoletti

PhD Thesis *co-supervising* with Dr. Jacopo Cavazza and Dr. Alessio Del Bue

PhD Topic: Unsupervised Feature Learning for Human Action Recognition

2020-

Sanket Kumar Thakur

PhD Thesis *co-supervising* with Dr. Alessio Del Bue

PhD Topic: Multimodal Visual Focus of Attention Detection

TEACHING EXPERIENCE

September 2011- May 2015

Tutor, Lab Demonstrator, Teaching Assistant, Marker and Guest Lecturer
in University of Edinburgh School of Informatics, Edinburgh, UK.
All courses were delivered in English.

- Advanced Vision (Year 4 Undergraduate & MSc):
Marker (33+33 hours) & Guest Lecturer (2 hours)
<http://www.inf.ed.ac.uk/teaching/courses/av/>
- Introductory Applied Machine Learning (Year 3 Undergraduate):
Tutor (8+8 hours)
<http://www.inf.ed.ac.uk/teaching/courses/iaml/>
- Database Systems (Year 3 Undergraduate):
Tutor (24 hours) & Marker (55 hours)
<http://homepages.inf.ed.ac.uk/libkin/teach/dbs13/>
- INF-1-DA: Informatics 1 - Data and Analysis (Year 1 Undergraduate):
Tutor (16+16+16 hours) & Marker (25+25+25 hours)
<http://www.inf.ed.ac.uk/teaching/courses/inf1/da/2013-2014/>
- INF-1-CP: Computer Programming: Skills and Concepts (Year 1 Undergraduate):
Demonstrator (20 hours) & Teaching Assistant (42+36 hours)
<http://www.inf.ed.ac.uk/teaching/courses/cp/>

September 2008- September 2011

Teaching Assistant (equivalent to Tutor, Lab Demonstrator and Marker)
in Baskent University, Department of Computer Engineering, Ankara, Turkey.
All courses were delivered in Turkish.

- BIL105 Programming Laboratory 1
Programming with C (Year 1 Undergraduate):
28 practice hours per section and year
<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501105>
- BIL106 Programming Laboratory 2
Programming with C++ (Year 1 Undergraduate):
28 practice hours per section and year
<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=503&ders=501106>
- BIL231 Discrete Structures (Year 2 Undergraduate):
14 practice hours per year
<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501231>
- BIL240 Programming Languages (Year 2 Undergraduate):

14 practice hours per year

<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501240>

- BIL284 Assembly Languages (Year 2 Undergraduate):
14 practice hours per year
- BIL364 Automata Theory (Year 3 Undergraduate):
14 practice hours per year
- BIL218 Computer Organization (Year 2 Undergraduate):
14 practice hours per year
<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501218>
- BIL344 Database Systems (Year 3 Undergraduate):
28 practice hours per year
<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501344>
- BIL429 Computer Networks (Year 4 Undergraduate):
28 practice hours per year
<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501429>
- BIL464 Multimedia Systems (Year 4 Undergraduate):
14 practice hours per year
<http://angora.baskent.edu.tr/bilgipaketi/?dil=EN&menu=akademik&inner=katalog&birim=501&ders=501489>

OTHER COMPETENCES

Programming Languages and Tools:

Python, MATLAB, C/C++, Java, SQL, Assembly, PERL, Haskell, HTML, CSS, LaTeX, Anaconda, TensorFlow, PyCharm, Git, OpenCV, Weka, R, MS Visual Studio

Operating Systems:

Windows, Linux-based systems

Languages:

Turkish (Native), English (Advanced), Italian (Intermediate)

MEMBERSHIPS

2018 -

- Association for Computing Machinery (ACM)

2014 -

- Associate Fellow of the UK Higher Education Academy

2013 -

- Institute of Electrical and Electronics Engineers (IEEE)
- The British Machine Vision Association (BMVA) Student Membership (interrupted in 2014).

OTHER ROLES

23-27 July 2018

Voluntary Work in DeepLearn 2018: International Summer School on Deep Learning, Genoa, Italy
Welcoming the participants, management of the meeting rooms, technical support. Interaction with participants from more than 80 countries, for a total of 72 hours of activities.

November 2011- July 2014

Voluntary Work
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: 366, h-index: 10, access on 26.02.2021
<https://www.scopus.com/authid/detail.uri?authorId=43260919000>

Google Scholar

Citations: 574, h-index: 11, i10-index: 15, access on 26.02.2021
<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 (16)

[J16]	C. Beyan* , M. Shahid* and V. Murino, " RealVAD: A Real-world Dataset for Voice Activity Detection", IEEE Transactions on Multimedia, Early Access 2020. doi: 10.1109/TMM.2020.3007350 <i>* indicates equal contribution</i>
[J15]	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

[J14]	C. Beyan , V. Murino, G. Venture and A. Wykowska, "Editorial: Computational Approaches for Human-Human and Human-Robot Social Interactions", <i>Frontiers in Robotics and AI</i> , vol. 7, no. 55, 2020. doi: 10.3389/frobt.2020.00055.
[IJ13]	C. Beyan , A. Zunino, M. Shahid and V. Murino, "Personality Traits Classification Using Deep Visual Activity-based Nonverbal Features of Key-Dynamic Images", <i>IEEE Transactions on Affective Computing</i> , Early Access 2019. doi: 10.1109/TAFFC.2019.2944614.
[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", <i>ISCIENCE</i> , 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", <i>IEEE Transactions on Multimedia</i> , 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", <i>IET Computer Vision</i> , 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", <i>IEEE Transactions on Multimedia</i> , 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 <i>Dascyllus reticulatus</i> Increases with Water Temperature", <i>ICES Journal of Marine Science</i> , 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", <i>Pattern Recognition</i> , 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", <i>Imaging Science Journal</i> , 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. 1-24, 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", SPIE Journal of Electronic Imaging, vol. 20, no. 3, 033001, 2011. doi: 10.1117/1.3602204.

Peer Reviewed International Conference (15) & Workshop Papers (5)

[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: ?? (~??% overall acceptance rate)
[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)

[IC18]	<p>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. <i>(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%)</i></p>
[IC17]	<p>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 * <u>indicates equal contribution</u></p>
[IC16]	<p>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 Bulò, 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) * <u>indicates equal contribution</u></p>
[IC15]	<p>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 <i>(Oral Presentation)</i></p>
[IC14]	<p>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)</p>
[IC13]	<p>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)</p>
[IC12]	<p>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)</p>

[IC11]	<p>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)</p>
[IC10]	<p>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 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</p>
[IC09]	<p>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)</p>
[IC08]	<p>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)</p>
[IC07]	<p>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)</p>
[IC06]	<p>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)</p>
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