WI-IAT 2022 Workshop/Special Session Proposal

Heading

• *Title of the workshop/special-session and acronym:* Affective Computing and Emotion Recognition, ACER-EMORE

• *Proposed duration (half-day or full-day):* half-day

• *Workshop/special session (co-)chair(s) name, affiliation and e-mail address:*

Organizer 1: Valentina Franzoni - valentina.franzoni@dmi.unipg.it (Department of Mathematics and Computer Science Perugia University)

Organizer 2: Jordi Valleverdú - jordi.vallverdu@uab.cat (Philosophy Department, Universitat Autònoma de Barcelona)

Organizer 3: Alfredo Milani - milani@unipg.it (Department of Mathematics and Computer Science Perugia University)

Organizer 4: Giulio Biondi - giulio.biondi@unipg.it (Department of Mathematics and Computer Science Perugia University)

• *Short CV of (co-)chair(s) including past experience in organizing workshops/special session and/or related events Introduction:*

The chairs organized together previous editions of the workshops on Affective Computing and Emotion Recognition (ACER) and editions of EMotion REcognition

(EMORE) workshops (5 editions of EMORE and 4 of ACER) co-located with International Conference on Computational Science (ICCSA, Brain Informatics (BI),

and Web Intelligence (WI-IAT) Conferences, in particular:

ACER 2017 at WI-IAT 2017,Leipzig, Germany

ACER 2019 at WI-IAT 2019. Thessaloniki, Greece

ACER 2021 at WI-IAT 2021, Melbourne, Australia

Moreover they chaired several international and national conferences and events, including international Conference (e.g.ICAPS, IEEE IDP) and Summer Schools(ICAPS,HKBU-UNIPG).

• Abstract: one paragraph describing the workshop/special-session purpose (max. 200 words)

Affective computing became a key scenario for Artificial Intelligence. Various emotion-mining techniques can be exploited for creating and automating

personalized interfaces or subcomponent technology for larger systems, i.e. in business intelligence, affective tutoring, recommender systems, social robots.

Different from sentiment analysis, this approach works at a deeper level of abstraction, aiming to recognize specific emotions and not only the

positive/negative sentiment, to extract, manage and predict emotions in limited sets, basing on well-accepted or novel models, thus to use them to be

reported/classified or understood/elicited/expressed by a machine. The aim of the ACER workshop is to explore the Emotion Recognition area in depth,

and to present, discuss and ideate novel affective computing and emotion recognition techniques in WI-related task, providing a cross-fertilized network of

different communities focused on research, development and applications of emotion recognition.

ACER invites original high-quality papers: conceptual, empirical as well as theoretical papers are welcome; graduate students are invited to submit their thesis

showcase; experienced researchers are warmly invited to submit novel or updated versions of their work.

• Scope and topics of the workshop

Topics include but are not limited to:

-Affective computing and Emotion Recognition in Web Intelligence

-Models of emotions, measuring emotions on the Web

-Multidimensional emotion recognition

-Emotional/affective process mining

-Emotions in the crowds, emotions and sentiments in social networks, link prediction

-Affective tagging and emotion recognition in Recommender Systems

-Emotion recognition across cultural variations, local-culture emotion recognition

-Semantic Emotion Recognition, Linked Data in affective spaces, affective ontologies, and sentic computing

-Natural Language Processing, Emotion extraction from text

-Automated emotion/mood tagging with emoji/memes

-Facial/gestures/visual emotion recognition and synthesis, emotion recognition in video streaming

-Emotional, affective states associated with music, audio or speech

-Recognition of emotions elicited by artistic stimuli e.g. paintings

-Affective computing, emotion recognition from Brain -Interfaces or sensors, e.g. EMG sensors, motion sensors, GPS tracking

-Biomimetic modeling of emotions, models of emotionally communicative behavior, evolved or emergent emotional behavior

-Emotion recognition in social robots, intelligent interfaces, symbiotic cognitive systems

-Affective states or emotions expressed by web-based/cloud robots, web-based Artificial intelligence, affective human-computer interfaces

-Online Human-Bot emotional interactions, real-time integrated systems

-Novel technologies using emotional elements that can better engage disabled people, e.g. with ASC (Autism Spectrum Conditions), in learning and communication

-Assertive robots, assertive artificial intelligence, artificial empathy and emotional intelligence in human-robot interactions

-Emotion recognition in business/government intelligence and marketing strategies

-Applications using web-based machine learning services e.g. IBM Watson, Google TensorFlow

-Specialized interfaces and animation technologies, applications in games and education, e.g. affective tutoring

-Ethical challenges on affective computing and emotion recognition in Web Intelligence, e.g. deception in emotions-aware HRI, emotional privacy, side effects and evolution of humanity using affective-intelligent web services

-Applicable lessons from other fields (e.g. robotics, AI, psychology)

- Motivation and Rationale

Providing a continuity venue in WI to the well-established community event in affective computing and emotion recognition.

• Tentative committee lists (organizers, program committee, etc.)

(see organizers list above)

• Expected number of participants and the expected number of submissions

6-10

• A short list of potential authors that are expected to submit papers to the workshop/special session
Valentina Franzoni
Alfredo Milani
Giulio Biondi
Jordi Vallverdú
Gulmira Bekmanova
Emmeke Veltmeijer
James Deng
Gaukhar Aripbay
Zhanerke Musekenova
Kristen Li

• A draft call for papers (max 1 page)
Affective computing became a key scenario for Artificial Intelligence. Various emotion-mining techniques can be exploited for creating and automating personalized interfaces or subcomponent technology for larger systems, i.e. in business intelligence, affective tutoring, recommender systems, social robots. Different from sentiment analysis, this approach works at a deeper level of abstraction, aiming to recognize specific emotions and not only the positive/negative sentiment, to extract, manage and predict emotions in

limited sets, basing on well-accepted or novel models, thus to use them to be reported/classified or understood/elicited/expressed by a machine. The aim of the ACER workshop is to explore the Emotion Recognition area in depth, and to present, discuss and ideate novel affective computing and emotion recognition techniques in WI-related task, providing a cross-fertilized network of different communities focused on research, development and applications of emotion recognition.

ACER invites original high-quality papers: conceptual, empirical as well as theoretical papers are welcome; graduate students are invited to submit their thesis showcase; experienced researchers are warmly invited to submit novel or updated versions of their work.

ACER aims also to create a network of research for future events and publications on Affective Computing, as already established in the previous editions (ACER@IEEE/ACM/WIC WI2017 Leipzig, Germany, with the special issue Emotional Machines: the next revolution in the Web Intelligence Journal; ACER@ICCSA2019 Saint Petersburg, Russia; ACER@WI2019 Thessaloniki, Greece, ACER@ICCSA2020, Cagliari, Italy, ACER@IEEE/ACM/WIC WI2021 Melbourne, Australia). Aiming at this collaboration path, ACER also welcomes papers on ongoing projects and PhD showcases, as well as applications, data sets, novel techniques, and multimodal or interdisciplinary approaches to emotion recognition. Cooperation between humans and machines for a shared action or goal is a desirable outcome.

Accepted papers (max 8 pages) will be published in the conference proceedings by the ACM Press and published in the conference proceedings, which in the past years have been always indexed in Scopus and WoS. Selected papers will be further invited for expansion and publication in Web Intelligence journal and other international journals.

Topics include, but are not limited to Affective Computing in:

- Affective computing and Emotion Recognition in Web Intelligence
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- Emotional/affective process mining
- Emotions in the crowds, emotions and sentiments in social networks, link prediction
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· Applicable lessons from other fields (e.g. robotics, AI, psychology)

ACER organizing committee:

- Valentina Franzoni, University of Perugia, Italy / Hong Kong Baptist University, Hong Kong (valentina.franzoni@dmi.unipg.it)

- Alfredo Milani, University of Perugia, Italy (milani@unipg.it)

- Giulio Biondi, University of Florence, Italy (giulio.biondi@unifi.it)

- Jordi Valverdù, Universitat Autonoma de Barcelona, Cataluña, Spain (jordi.vallverdu@uab.cat)

More information on https://www.dmi.unipg.it/acer-emore or https://acer-emore.sites.dmi.unipg.it

• Workshop/special session format planned (keynote, expected number of presented papers, invited talks, panels, demonstrations, etc.) Tentative Internal and External Schedule (Except adjustments by the Chairs to align all workshop/special session schedules)
Keynote by Valentina Franzoni
papers presentation
Keynote by Jordi Valverdù
papers presentation

• Important data (tentative except adjustment for extensions)

July 1, 2022: Full Papers Submission

July 20, 2022: Paper Acceptance Notification

July 20, 2022: Early Registration Opens

August 7, 2022: Camera-ready Submission

November 17, 2022: ACER-EMORE@WI