



CALL FOR PAPERS

Image and Vision Computing Journal

Special Issue on

Affect Analysis in Continuous Input



Human affective behavior is multimodal, continuous and complex. In day-to-day interactions people naturally communicate subtle affective states by means of language, vocal intonation, facial expression, hand gesture, head movement, body movement and posture, and possess a refined mechanism for understanding and interpreting information conveyed by these behavioral cues. Despite major advances within the affective computing research field, modeling, sensing, recognizing, interpreting and responding to such human affective behavior still remains as a challenge for automated systems as human emotions are complex constructs with fuzzy boundaries and with substantial individual variations in expression and experience. Thus, a small number of discrete categories (e.g., happiness and sadness) may not reflect the subtlety and complexity of the emotions conveyed by such rich sources of information. Therefore, human and behavioral computing researchers have recently invested increased effort exploring how to best model, analyze and interpret the subtlety, complexity and continuity (represented along a continuum) of affective behavior in terms of latent dimensions (e.g., arousal, power and valence) and appraisals, rather than in terms of a small number of discrete emotion categories (e.g., happiness, sadness, surprise, disgust, fear and anger).

Therefore, this Special Issue aims to focus on *Affect Analysis in Continuous Input* and to attract original articles discussing the issues and the challenges pertinent in sensing, recognizing and responding to continuous human affective behavior from diverse communicative cues and modalities.

More specifically, it will bring together research work (i) reviewing the latest developments in the field, (ii) exploring and proposing novel dynamic pattern recognition and prediction techniques and multimodal fusion methods, (iii) setting key standards, and defining future research directions, and (iii) demonstrating the practical use of these methodologies in various application domains (e.g., interaction with robots, virtual agents, and games, single and multi-user smart environments, clinical and biomedical studies, etc.).

Suggested submission topics include, but are by no means limited to:

- Analysis of human affective behavior in continuous input
 - facial expressions
 - head movements and gestures
 - body postures and gestures
 - multiple cues and modalities (e.g., video, speech, non-linguistic vocalizations, biosignals such as heart, brain, thermal signals, etc.)
- Novel pattern recognition and prediction approaches
 - discretized and continuous prediction of affect
 - handling the dynamics of affective patterns
 - novel recognition and prediction methods
 - optimal strategies for fusion
 - modeling high inter-subject variation
- Data acquisition and annotation
 - (multimodal) naturalistic data sets
 - (multimodal) pattern annotation tools
 - modeling annotation patterns from multiple raters and reliability
- Applications
 - interaction with robots, virtual agents, and games (including tutoring)
 - single and multi-user smart environments (e.g., in a car)
 - implicit (multimedia) tagging
 - clinical and biomedical studies (e.g., autism, depression, pain etc.)

Tentative Dates

- Full paper due: 1 October 2011
- First notification: 1 January 2011
- Revised Manuscript (for second review) due: 1 March 2012
- Acceptance notification: 1 May 2012

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Submission Procedure

Prospective authors should follow the regular guidelines of the Image and Vision Computing Journal for electronic submission:

(<http://ees.elsevier.com/imavis>). During submission authors must select the “Special Issue: Continuous Affect Analysis” when they reach the “Article Type”.