



**International Workshop on
Emotion Representations
and Modelling for
Human-Computer Interaction
Systems
ERM4HCI 2013**

Organisers

Kim Hartmann
University Magdeburg,
Germany

Ronald Böck
University Magdeburg,
Germany

**Christian Becker-
Asano**
University Freiburg,
Germany

Jonathan Gratch
University of Southern
California, USA

Björn Schuller
TU Munich, Germany

Klaus R. Scherer
University of Geneva,
Switzerland

Scope

To develop user adaptable Human-Computer Interaction (HCI), the role of emotions occurring during interaction became increasingly valuable over the past years. Emotions, being widely accepted as essential to Human-Human interaction, became relevant for system designers of affective interfaces in order to provide natural, user-centred interaction. However, to adequately incorporate emotions in modern HCI systems, results from varying research disciplines must be combined.

An affective system must be able to detect, identify, process and respond to emotions occurring during HCI in realtime. Hence, the methods involved in emotion processing must be reliable, efficient and well-defined throughout the systems abstraction layers. In order to fulfil these requirements, conceptual work is needed to define suitable technical models on emotion, disposition and behaviour. To allow technical systems to automatically process and respond to emotions, the defined models must link machine-detectable, physical, human characteristics to abstract strategic algorithms and be consistent with the predominant emotion theories and observations.

Emotions occurring during HCI are detected feature-based, depending on the modalities provided and implying the necessity of identifying significant features. Furthermore, these features must be processed in an adequate way to allow the automatic distinguishing of emotions. In multi-modal systems sufficient fusion techniques must be defined to maximize the correctness of the emotion detection and synthesis. To respond to the detected emotions, the system should be provided with an artificial emotional intelligence. Artificial emotional intelligence in turn requires a combination of knowledge databases, history processing, plan construction, coping strategies, user models, emotion and behaviour theories.

Currently, several solutions on incorporating emotions in technical systems exist. These solutions depend heavily on the scope, application and modalities used. The applied concepts tend to be highly specific and layer dependent, often lacking universality and interoperability. However, to allow cognitive technical systems to become truly affective and user adaptable, all methods used must have a reliable theoretic foundation and cooperate.

Important Dates

Submission Deadline:
July, 15th 2013

Notification of
Acceptance:
September, 20th 2013

Camera-ready Deadline:
October, 14th 2013

Workshop Date:
December, 13th 2013

Topics include, but are not limited to:

- Theoretic models of emotion in affective computing
- Role and models of emotion for cognitive modelling
- Best practice representations of emotions in HCI systems
- Processing of emotions during HCI
- Role and models of emotion in user modelling
- Emotion representation for knowledge bases
- Learning emotions: Strategies and representations
- Models on the perception of emotions and emotion synthesis
- Studies on emotion representations and their implications
- Applications

Program Committee

Jonas Beskow
KTH Stockholm, Sweden
Nadia Bianchi-Berthouze
U College London, UK
Carlos Busso
U Texas Dallas, USA
Antonio Camurri
U Genova, Italy
Nick Campbell
TCD, Ireland
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KTH Stockholm, Sweden
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Istanbul Technical U, Turkey
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Chinese Ac. Sciences, China
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U Nottingham, UK
Karla Welch
U Louisville, USA
Andreas Wendemuth
U Magdeburg, Germany

Submission

Prospective authors are invited to submit full papers (6 pages). All submissions should be anonymous and according to the specifications of the ICMI 2013.

For further information refer to erm4hci.kognitivesysteme.de