

Introduction to the “Best of ACII 2013” Special Section

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WE are delighted to introduce this special section featuring expanded versions of the best papers from the 6th Biannual International Conference on Affective Computing and Intelligent Interaction (ACII 2013), held from September 2-5, 2013, in Geneva, Switzerland. The ACII conference series is the flagship conference of the Association for the Advancement of Affective Computing (aaac—formerly the Humaine Association) and is the premier international forum for all areas of affective computing research. The ACII 2013 conference received 175 full-paper submissions, which were rigorously reviewed by members of the Program Committee and further vetted by a Senior Program Committee and the Program Chairs. A total of 55 papers were accepted for oral-presentation at the conference. These 55 papers were ranked based on the scores received during the review process and this special section features enhanced versions of five of the top-ranked papers, which went through additional round(s) of review/revision. These five papers reflect the diversity of affective computing research, ranging from physiological models for affect detection, methodological issues, computational models of affect, and human perceptions of affective virtual agents.

In the first paper, “I Can Already Guess Your Answer: Predicting Respondent Reactions during Dyadic Negotiation,” Park, Scherer, Gratch, Carnevale, and Morency, study non-verbal cues in human-human negotiation scenarios. They investigate whether a diverse set of cues encompassing facial and vocal expressions of the proposer, the respondent, their mutual synchrony, and the past negotiation history can be used to predict whether a negotiation offer will be accepted vs. rejected as well as whether the overall negotiation experience is competitive vs. cooperative. The finding should be of considerable significance to those involved in computer-supported negotiation research.

The second paper, “Correcting Time-Continuous Emotional Labels by Modeling the Reaction Lag of Evaluators,” by Mariooryad and Busso, makes an important methodological contribution to the field of affect detection. It is widely known that supervised affect classifiers are adversely affected by artefacts introduced in the affect annotation process. In the context of time-continuous affect annotations studied in this paper, the artefact consists of a time delay

between an affective cue and the time taken by an annotator to process the cue and provide the annotation (called the reaction lag). The authors propose a method to estimate this time-shift and show that applying their method to correct for the reaction lag has quantifiable improvements on affect detection performance. This finding has implications for researchers using a time-continuous approach for affect annotation.

The third paper, “Neuroticism, Extraversion, Conscientiousness and Stress: Physiological Correlates,” by Brouwer, van Schaik, Korteling, van Erp, and Toet, focus on assessing whether stable personality traits have predictable psychological signatures via measures of skin conductance, heart rate, and heart rate variability. Physiological-personality correlations were studied both during a baseline period and during a stressful period induced by game-play. Their results suggest measurable relationships between physiological measures and personality dimensions and highlight the need for psych-physiological theoretical development to explain some of the complex patterns uncovered.

In the fourth paper, “Subjective Perceptions in Wartime Negotiation,” Wang, Pynadath, and Marsella study both subjective and objective outcomes of simulated wartime negotiations between humans and computer agents. They find that humans’ satisfaction in the outcome of a negotiation goes beyond simple gain/loss assessments to also include their perceptions of the process by which the outcome was achieved (e.g., whether the outcome was based on a negotiated agreement or an adversarial arrangement). The findings have important implications for those interested in designing computer agents for negotiation tasks.

Finally, in “Humans vs. Computers: Impact of Emotion Expressions on People’s Decision Making,” de Melo, Gratch, and Carnevale study how people differentially respond to emotional expressions of virtual humans when they perceive the virtual humans to be computer-controlled agents or human-controlled avatars. They studied the interaction between agency (computer vs. human) and facial expression (cooperative vs. competitive or anger vs. neutral) on human decision making during social dilemmas and negotiation scenarios. Their findings show that the mere perception of a virtual human as being an agent or an avatar moderates the effects of facial expression on behavior in rather striking ways. This finding has important implications on the design of virtual humans in decision-making scenarios.

We would like to end this editorial by deeply acknowledging the reviewers for this special section as well as the reviewers who helped select these five papers from the 175 papers submitted to the conference. We would also like to acknowledge the many individuals who made ACII 2013 a resounding success, especially the conference general chairs (Thierry Pun, Catherine Pelachaud, and Nicu Sebe)

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and the local organizing committee (Guillaume Chanele and Stéphane Marchand-Maillet). We would also like to thank all of the authors for submitting their best work to ACII 2013 and are eagerly anticipating a special section on the *Best of ACII 2015*, following the next conference of the series to be held September 21-24 in Xi'an China.

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