

International Workshop on "Perception and Expression of Emotions"

日時 2011年7月25日(月) 15:00-18:00

場所：京都大学こころの未来研究センター本館（稲盛財団記念館）3F中会議室

<http://kokoro.kyoto-u.ac.jp/jp/about/access.html>

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15:00-16:00

Catherine Pelachaud (CNRS-Telecom ParisTech)

Emotionally expressive virtual agents

16:00-16:30

Sylwia Hyniewska (CNRS-Telecom ParisTech)

Testing the impact of behaviours perceived by third parties on the attribution of emotional labels and appraisals to humans and virtual characters

16:30-17:00

Wataru Sato (Kyoto University)

Temporal profile of amygdala activities in response to faces and emotional facial expressions

17:00-17:30

Reiko Sawada (Kyoto University)

Self processing of handwritten characters: An ERP study

17:30-18:00

Shota Uono (Kyoto University)

Reduced representational momentum for subtle dynamic facial expressions in autism spectrum disorders

アブストラクトなど詳細な情報は以下になります。

Presenter:

Catherine Pelachaud (CNRS-Telecom ParisTech, France)

Title:

Emotionally expressive virtual agents

Abstract:

During this talk we will present our work on creating an expressive emotional Embodied Conversational Agents, ECAs. Emotions are expressed by dynamic multimodal behaviours, in particular as sequences of facial expressions and body movements. Expressions of emotions are no longer modelled as static expressions at their apex; rather they correspond to a temporally ordered sequence of multimodal signals. Facial expressions may also be the result of several simultaneous emotions. We refer to complex expressions. Their model follows a componential approach where a new expression is obtained by combining facial areas of other expressions. Our models of facial expressions of emotions rely on the careful analysis of video corpora and the elaboration of a representation scheme that describes the temporal evolution of the expression of an emotion. We will also present on-going work on endowing

virtual agent with soft conversational skills. We will concentrate on multimodal nonverbal behaviours, for the locutor and the interlocutor within a dyadic interaction. We will present a real-time platform of agents that exhibit backchannel signals in relation to their interlocutors (be virtual or real human user).

Presenter:

Sylwia Hyniewska (University of Geneva, Switzerland & CNRS-Telecom ParisTech, France)

Title:

Testing the impact of behaviours perceived by third parties on the attribution of emotional labels and appraisals to humans and virtual characters

Abstract:

Given componential appraisal theorists' (Scherer & Ellgring 2007) assumption that there are many different possible combinations of appraisal results and consequent efferent expression patterns, a larger variety of patterns is expected than what is seen in prototypical or modal expressions. What is more, the different cues, particularly facial movements, that contribute to the general emotional expressions could be linked to particular appraisal results and be interpretable in terms of those. To go beyond the perceptive paradigm with actor portrayals, we relied on non-acted behavior from a hidden camera in a naturally emotional situation. Short audio-visual clips presenting a person in a face-to-face context with another human have been evaluated, through a forced-choice questionnaire based on the appraisal theory's items. The appraisal theory enables to predict the link between facial expressions and mental state attributions. In our case it is used to predict the intuitive answers of participants to the observed expressions. As a second step a virtual character, Greta, was used as a tool to validate the observations established in the first task. Short emotional expressions from the natural setting have been reproduced on the virtual character and some behavioural cues have been manipulated one by one to test their impact on third party attribution of mental states.

Presenter:

Wataru Sato (Kyoto University, Japan)

Title:

Temporal profile of amygdala activities in response to faces and emotional facial expressions

Abstract:

Faces and facial emotional expressions play important roles in social activities in humans. Neuroimaging studies have indicated that the amygdala is critically involved in processing faces and emotional facial expressions. However, little is known about the temporal profile of amygdala activation. We investigated this issue by recording the intracranial field potentials of the amygdala in subjects undergoing pre-surgical assessment. In Experiment 1, subjects observed faces, mosaics, and houses. Time-frequency statistical parametric mapping analyses revealed that the amygdala showed greater gamma-band activity in response to faces than to mosaics at 200-300 ms, with a peak at 250 ms. Gamma-band activation with a similar temporal profile was also found in response to faces versus houses. In Experiment 2, the subjects

observed fearful, happy, and neutral facial expressions. The amygdala showed greater gamma-band activity in response to fearful compared with neutral facial expressions at 50-150 ms, with a peak at 135 ms. These results suggest that the human amygdala is involved in the early stages of face and facial expression processing.

Presenter:

Reiko Sawada (Kyoto University, Japan)

Title:

Self processing of handwritten characters: An ERP study

Abstract:

Handwritten characters are products of our actions, and they possess personal information. We measured event-related potentials (ERPs) to explore the temporal features of self-processing while participants were judging whether presented stimuli were in their own handwriting. We found a self-relevant effect in the 250-350 ms time window in the midline and right fronto-parietal regions. Neural activity related to self-processing in handwritten characters is elicited around 300 ms following stimulus onset, which is as that reported for other self-related stimuli such as self-face processing. Previous studies have reported that cortical midline structure (CMS) is associated with social or mental aspects of the self, meanwhile right-lateralized frontal and parietal regions have been found to be involved in physical aspects of the self, such as self-face and voice. Our results suggest that self-processing of ownership of handwritten characters involves aspects of both psychological and bodily self-processing.

Presenter:

Shota Uono (Kyoto University, Japan)

Title:

Reduced representational momentum for subtle dynamic facial expressions in autism spectrum disorders

Abstract:

Individuals with Autism Spectrum Disorders (ASD) have difficulty with social interaction, which includes communication via emotional facial expressions. Little is known about the cognitive mechanisms underlying impaired social communication via emotional facial expressions in ASD. We examined “representational momentum” for dynamic facial expressions, which indicates exaggerated subjective perception of the last image of dynamic facial movement, using facial expression stimuli of three levels of emotional intensity (subtle, medium, extreme). Individuals with ASD and typically developing controls were asked to select the same image with the last image of previously presented dynamic or static facial expressions. Subjectively perceived images were more exaggerated for the dynamic than static presentation under all levels of intensity conditions in both groups. The ASD group, however, perceived a reduced degree of exaggeration for dynamic facial expressions under subtle intensity conditions, compared with controls. This suggests that individuals with ASD are impaired particularly in the perception of facial expression of subtle emotional intensity in real social situations.

Individuals with ASD, with their reduced perception of emotional intensity, might show inappropriate social skills in detecting subtle changes in other people's facial expressions in order to induce adaptive behavioral responses.