

Research Seminars in General Psychology and Cognitive Neuroscience
("Forschungskolloquium für Absolventen, Doktoranden, und Mitarbeiter")

„General Psychology and Cognitive Neuroscience“

(Prof. Dr. Stefan R. Schweinberger)

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<http://www2.uni-jena.de/svw/allgpsy/researchseminars.htm>

Event Schedule

05.07.2010	Markus Bindemann, University of Essex, UK	Finding people in natural scenes
28.06.2010	Jürgen Kaufmann, Jena	Enhancing spatial distinctiveness in faces: A potential first step towards treating prosopagnosia?
21.06.2010	Marie L. Smith, MRC Cognition and Brain Sciences Unit, Cambridge, UK	Inverse mapping the neuronal correlates of face categorizations
14.06.2010	Romi Zäske, Jena	Perceptual adaptation to vocal age
07.06.2010	Andy J. Calder, MRC Cognition and Brain Sciences Unit, Cambridge, UK	The Functional and Neural Bases of Social Attention Perception
17.05.2010	Johanna Stahl, Jena	The Own-Race Bias and ERPs – effects of ethnicity on face processing and recognition
10.05.2010	Holger Wiese, Jena	Age and ageing in face perception and memory: Initial findings
03.05.2010	Nadine Hauthal, Jena	Selective visual attention: Are deaf individuals more susceptible to face and object distractors in the periphery?
26.04.2010	Christian Walther, Jena	Neuronal correlates of auditory adaptation to speaker identity

Markus Bindemann

University of Essex, UK

Finding people in natural scenes

Human observers are skilled at finding faces in natural scenes, but rather little is known about how we can achieve this. This is surprising as face detection is a prerequisite to any further face processing such as identification or expression analysis - tasks that have received a great deal of attention by psychologists. In this talk I will present a series of experiments investigating the

nature of a human face detection "signature". These experiments focus on the impact of colour information, viewpoint, the role of the human body, and central viewing tendencies when observers try to locate another person's face within complex visual scenes.

Marie Smith

MRC Cognition and Brain Sciences Unit, Cambridge, UK

Inverse mapping the neuronal correlates of face categorizations

Face perception is a complex process involving a network of brain structures, dynamically processing information to enable judgments about a face to be made. In this talk I will introduce an analysis methodology that makes it possible to directly study this information processing in the brain from spatially and temporally resolved EEG and MEG signals and apply it to the study of a number of face categorization tasks (gender, expression). Crucially, this approach specifically establishes which information in the visual stimulus the brain signal is responding to and how this varies with time, cortical location and task demands to establish a more precise view of information processing mechanisms in the brain.

Andy J. Calder

MRC Cognition and Brain Sciences Unit, Cambridge, UK

The Functional and Neural Bases of Social Attention Perception

Accurate perception of others' eye gaze direction is central to social interaction. Gaze signals a person's focus of attention, provides information about the person's cognitive and emotional state, and is used to establish joint attention or exercise social control. These aspects of gaze processing have been studied relatively extensively, but until recently, little was known about the perceptual mechanisms underlying human gaze processing. Seminal work by Perrett and colleagues had identified cells in the anterior temporal sulcus (STS) tuned to different head and gaze directions (e.g., direct, left/right). Using a visual adaptation paradigm we studied whether gaze, head, and body orientations are represented in a similar manner in humans. With fMRI we have gone to explore the neural correlates of these effects. The results of these studies will be discussed.

Johanna Stahl

Friedrich Schiller University of Jena

The Own-Race Bias and ERPs – effects of ethnicity on face processing and recognition

Faces of another ethnicity are generally harder to recognize than faces from the observer's own ethnicity. This so-called own-race bias is most commonly attributed to lifetime experience and long-term perceptual expertise with own-race faces. In this talk, I will present a series of studies in which we examined the own-race bias and underlying neuro-cognitive mechanisms in own- and other-race face processing. We tested the influence of expertise on the behavioural own-

race bias and face processing as measured by ERPs in several experiments by either varying participants' expertise with other-race faces (study 1), by switching the task objective while learning own- and other-race faces (study 2) or by simulating perceptual expertise through intensive individuation training (study 3). In contrast to that, a fourth study was conducted to specifically disentangle the neural correlates of both ethnicity processing and face inversion in own- and other-race faces. Our results argue for an influence of long-term expertise on the own-race bias and qualitatively different neural processes when perceiving and recognizing faces from one's own and another ethnic group.