



EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

Freitag, 6. November 2009, 14 Uhr c.t.

im Raum W2 1-143, Universität Oldenburg

und im Raum G26.1 – 010, Rechenzentrum
der Universität Magdeburg (per Videoübertragung)

“Causal Inference in Cognition and Perception”

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One of the attributes which is considered typical of human cognition is the ability to infer the causal relationship underlying a set of events. In contrast, perception is by some thought to be a simple process that converts noisy and uncertain information into a form that allows other systems to process the information further. However, through Bayesian inference, perception can take advantage of knowledge about the causal structure of the environment. E.g., stimuli originating from the same source should be integrated, whereas stimuli from separate sources should be segregated.

I will show how a Bayesian model can implicitly (and explicitly) perform causal inference and present evidence that human perception does utilize such a strategy. I will also present results from further experiments testing predictions from the model. These studies support the idea that the perceptual system is not merely a passive processing step, but plays a much more active role in how we interpret our surroundings.