

MCN Lecture Series WiSe 08/09

Monday, 6. October 2008, 18:00 - 19:00

"Learning to localize sound"

by **Prof. Andrew King** (Oxford University, Auditory Neuroscience Group)

Location: Biocenter Small Lecture Hall B01.019

Contact: Oliver Behrend mcn@lmu.de

Monday, 3. November 2008, 18:00 - 19:30

von **Prof. Julian Nida-Rümelin**, Staatsminister a.D. (Lehrstuhl für Politische Theorie und Philosophie Geschwister-Scholl-Institut der Universität München)

"Welche Rolle spielt das Bewusstsein für unser Selbstverständnis als frei und verantwortlich Handelnde? Ist dieses Selbstverständnis durch aktuelle neurowissenschaftliche Forschungsergebnisse gefährdet? Welche Perspektiven ergeben sich für das Verhältnis Lebenswelt - Philosophie - Naturwissenschaft?"

Location: MKE Bibliothek M210, Hauptgebäude der LMU, Geschwister-Scholl-Platz 1

Contact: Oliver Behrend mcn@lmu.de

Monday, 8. December 2008, 18:00 - 19:00

"Auditory cortex: the crucial link between sound and mind?"

by **Dr. Jan Schnupp** (Oxford University, Auditory Neuroscience Group)

"It is widely appreciated that the sense of hearing relies on the capture and analysis of sound waves, but the 'internal' perception of a sound wave can be far removed from the physical properties of a sound. Much is known about how the inner ear and brainstem nuclei encode low level physical features of the sound. But the role of auditory cortex is less clear. Often it is assumed that cortex is the site of 'perception'. If this is true, then it ought to be possible to explain subjective perceptual judgments in terms of a suitable decoding of neural activity recorded in auditory cortex. In this talk I will describe a number of recent experiments from our laboratory, in which we have attempted to test this hypothesis directly by combining psychophysical measures of discrimination of temporal patterning or pitch of complex sounds with electrophysiological recordings."

Location: Biocenter, Small Lecture Hall B01.027

Contact: Oliver Behrend mcn@lmu.de

Monday, 2. February 2009, 18:00 - 19:00

"Decoding conscious and unconscious mental states from brain activity in humans"

Prof. Dr. John-Dylan Haynes (Bernstein Center for Computational Neuroscience Berlin and Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig)

“Recent advances in human neuroimaging have shown that it is possible to accurately read out a person's conscious experience based only on non-invasive fMRI measurements of their brain activity.

This "brain reading" is possible because each thought is associated with a unique pattern of brain activity that can serve as a "fingerprint" of this thought in the brain. By training a computer to recognize these fMRI "thought patterns" it is possible to read out what someone is currently thinking with high accuracy. Here several studies will be presented that also directly address the relationship between neural encoding of information (as measured with fMRI) and its availability for awareness. These studies include comparisons of neural and perceptual information, unconscious information processing, decoding of timecourses of perception, as well as decoding of high-level mental states. This will show that it is possible to read out a person's concealed intentions and even to predict how someone is going to decide a few seconds later. Finally, the talk will discuss fundamental challenges and limitations of the field, along with the ethical question if such methods might one day be a danger to our mental privacy.”

Location: MKE Bibliothek M210, LMU Hauptgebäude, Geschwister-Scholl-Platz 1

Contact: Prof. Oliver Behrend mcn@lmu.de