

Session 5	Neural basis for auditory perception
Time	10:00 – 10:30
Name	Alexander Gutschalk (University of Heidelberg)
Title	Functional imaging of bistable perception and auditory perceptual awareness
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Abstract	<p>The perception of complex auditory sequences is often not completely determined by the physical stimulus sequence. One example is auditory streaming, where two interleaved tone sequences may either be grouped into one coherent stream or segregated into two separate streams. When certain parameters are chosen, the sequence may produce a bistable percept and the perception will switch back and forth between one and two streams. A second example is informational masking in a multi-tone masker paradigm, where a regular tone sequence is ³hidden² in an irregular masker sequence. Listeners may often fail to hear out the target sequence, but in other trials the target pops out and produces a salient percept. When the listeners indicate their perception during functional imaging, these sequences allow us to study neural activity that is associated with the current perception in the absence of any modifications to the physical stimulus. In this talk, I will present results from magnetoencephalography (MEG) and functional magnetic resonance imaging (fMRI) using streaming and informational masking paradigms. The results demonstrate that certain components of activity in the auditory cortex covary with the perception.</p> <p>However, not all activity in the auditory cortex reflects perception, and (earlier) stimulus driven activity coexists with perception related activity in the same cortical fields.</p>