Biographical Note:

Dr. Senkowski is a professor of Clinical Neuropsychology at Charité Berlin, where he leads the Multisensory Integration Research Group. His studies focus on the question how bottom-up and top-down processes influence unisensory and multisensory processing in the human brain. His research group examines neuronal oscillations in cortical networks and neurotransmitter concentrations in selected brain regions in healthy persons and clinical populations, with a focus on schizophrenia. Their studies also look at the neuronal mechanisms underlying the processing and perception of pain.

Abstract:

A few years ago, Dr. Senkowski and others proposed that synchronized neural oscillations play an important role in multisensory processing (Senkowski, Schneider, Foxe, Engel, 2008, Trends Neurosci). Since then, various studies have been conducted and novel research questions have emerged in this growing research field. In this talk, he will provide an updated overview on these studies, which have targeted, among others, clinically relevant topics, such as the crossmodal shaping of pain. Finally, he will present recent data from a combined magnetic resonance imaging and electroencephalography study which provided compelling evidence for the proposed crucial role of neural synchrony in multisensory processing.

Neural synchrony and multisensory processing:
An updated overview and innovative data

Daniel Senkowski, Ph.D.
Charité - Universitätsmedizin Berlin