NICK RAMSEY

CV

PARTICIPANT AT:

A DIALOGUE WITH THE CEREBRAL CORTEX:
CORTICAL FUNCTION AND INTERFACING

April, 29th-30th, 2015, Barcelona

Nick Ramsey, Head of the Cognitive Neuroscience Research Programme of the Department of Neurology & Neurosurgery, **UMC Utrecht**, The Netherlands

Nick Ramsey has a degree in Psychology and a PhD in neuropsychopharmacology, both form the university of Utrecht. He became a specialist in cognitive neuroimaging in the US (National Institutes of Health), and applies modern techniques, including fMRI and intracranial EEG, to questions on working memory, language and sensorimotor function. His primary goal is to acquire and translate neuroscientific insights to patients with neurological and psychiatric disorders, with a focus on brain-computer interfacing. He is full professor in cognitive neuroscience at the department of neurology and neurosurgery of the UMC Utrecht since 2007. He has been awarded several personal grants fro the Dutch Research Foundation including a VIDI (2002) for elucidating working memory, and a VICI (2006) for developing intracranial BCI concepts for paralyzed people. The latter resulted in an implantable prototype for locked-in patients for which a clinical trial started in 2014. He received an ERC Advanced grant in 2013 for developing methods of decoding inner speech intracranial Brain-computer Interfaces.

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ABSTRACT

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Cortical Activity Pattern Decoding for Human Intracranial BCI

Recording and decoding brain activity from the surface of the cortex is an alternative approach to brain-computer interfacing in humans compared to indwelling electrodes. Proof of concept research is conducted in patients with surface electrodes implanted for diagnostic purposes but also in healthy volunteers with advanced functional MRI technology. In the first part I will present research leading up to a clinical study with a fully implantable BCI system for locked-in patients. In the second part I will discuss how ultra-high field fMRI opens new avenues for future implantable BCI solutions, including decoding of inner speech.

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