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## **Event related Brain activation and Neurofeedback**

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t is well known that pathologies show certain brain regions with either increased or decreased activity. For example, typical depression has an increased activation in the insula according to fMRI studies. If we show negative pictures to a person, there are specific locations in the brain that are activated as a consequence of those stimuli (Canli et al., 2002). The same concept works with standardized low-resolution brain electromagnetic tomography (sLORETA) which incorporates a mathematical inverse solution of surface EEG data to provide cortical source localization, and generating threedimensional images, similar to those produced by fMRI data (Thatcher, 2013). The negative brain activation to a stimulus often causes problems for example with patients suffering from depression, anxiety and PTSD. Based on those findings we've created an event related Neurofeedback-Protocol based on the stimulus and the hereby evoked brain response. Our innovative Neurofeedback-Protocol uses precisely time locked operant feedback and neurotherapy which is directly related to the given stimulus and the brain response

## **Speaker Biography**

Thomas F Feiner has more than 25 years experience as an occupational therapist and neurotherapy He conducted and participated clinical research on QEEG and evoked potentials and Neurofeedback since 2006. He developed computer software for testing the auditory order threshold on regular Windows PCs and created an easy to use stimulus presentation program for research in the field of evoked potentials and other psychophysiological measures. He is the clinical director of the Center for Neurofeedback in Munich and established the Institute for EEG-Neurofeedback in 2008 which offers professional education programs in the field of Neurofeedback, Quantitative EEG and evoked potentials. Since 2017 he conducted Research on the EEG of meditators in great study of more than 1000 subjects. He is founder and owner of Neurofeedback. His focus is on research and development of integrated neurofeedback, event related potentials in combination with low level brain stimulation technologies.

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