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SPEAKER ABSTRACTS

rest, there is a rich spectrum of fluctuations due to systemic and local changes of the hemoglobin saturation and concentration. This spectrum is strongly altered by the execution of observed correlation and synchronization of the changes in the stimulation. Dramatic changes in hemoglobin saturation also occur during rest conditions, e.g., during sleep. The capability to determine local changes of hemoglobin saturation is useful to assess local circulatory and metabolic abnormalities in the brain.

4. Fluctuation of Optical Parameters in the Brain ENRICO GRATTON, *Laboratory for Fluorescence Dynamics, University of Illinois at Urbana-Champaign, Illinois*

Near-ir light is used to measure the changes in optical parameters occurring in the brain at rest and during periodic tasks. Frequency-domain methods allow a fast determination of the absolute values of the absorption and scattering coefficients at different wavelengths. Near-ir light penetrates deep into tissues and reaches the surface of the brain, allowing noninvasive observation of changes due to circulation and metabolism in vivo. At