

Coorbit theory, multi-modulation frames and the concept of joint sparsity for medical multi-channel data analysis

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This talk is concerned with the analysis and decomposition of medical multi-channel data. We present a signal processing technique that reliably detects and separates signal components such as mMCG, fMCG or MMG by involving the spatio-temporal morphology of the data provided by the multi-sensor geometry of the so-called multi-channel superconducting quantum interference device (SQUID) system. The central mathematical building blocks are Coorbit theory, multi-modulation frames and the concept of joint sparsity measures.