

Inverse Problems Network Meeting 6

Thursday, 12th December 2019 - Friday, 13th December 2019

University of Manchester

Abstract of Talk

NOVEL COMPUTATIONAL METHODS FOR MEDICAL IMAGING

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First, a general introduction of the importance of functional medical imaging will be presented, and then certain novel computational algorithms will be discussed. In particular, it will be shown that the combination of the so-called spline reconstruction technique and of a new analytic inversion of the attenuated Radon transform provide an efficient alternative to existing commercial algorithms for SPECT. In addition, the definitive answer to the non-uniqueness question for both EEG and MEG will be provided, and effective algorithms for extracting maximum information from EEG and MEG data about the 'visible' part of the neuronal current that has generated these data will be described.