

Inverse Problems Network Meeting 4

Thursday, 17th January 2019 - Friday, 18th January 2019

Mall Room, Level 8 of the School of Mathematics, University of Leeds

Abstract of Talk

HISTOGRAM TOMOGRAPHY

Prof. W Lionheart
University of Manchester

In many tomographic imaging problems inverse problems the data are integrals over lines of scalar, vector or tensor fields. In this talk we consider a range of problems in which for each line one has information about the distribution of the values along the line. In the scalar case one application is near infrared spectral tomography, for vector fields Doppler velocimetry and for tensor fields examples include strain tomography from neutrons or x-rays. We will look at two separate approaches to reconstruction, one using the cumulative distribution to reconstruct the characteristic function of sub-level sets and another using moments of the distribution.