

## **Inverse Problems Network Meeting 2**

Thursday, 23<sup>rd</sup> November 2017 - Friday, 24<sup>th</sup> November 2017

Isaac Newton Institute, Cambridge

### **Abstract of Talk**

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## **COMBINING RECONSTRUCTION AND CLASSIFICATION WITH SOME APPLICATIONS IN NON-LINEAR INVERSE PROBLEMS**

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Analysis of medical images often proceeds by applying some of the well-known and successful segmentation or labelling approaches from machine vision, under the assumption that the images have been robustly reconstructed. In the case of ill-posed and especially non-linear inverse problems the reconstruction process can lead to considerable artefact in the images which is not always removed by standard regularisation techniques. In this talk we present an approach that applies classification algorithms within iterative reconstruction algorithms. Results are presented for some non-linear parameter identification problems.