

Signal processing and inference for the physical sciences

Monday 26 to Tuesday 27 March 2012

Organised by Dr Nick Jones and Dr Tom Maccarone

DAY 1				DAY 2			
SESSION 1 Chair: John Sahr		SESSION 2 Chair: Guy Nason		SESSION 3 Chair: David van Dyk		SESSION 4 Chair: Robert Palmer	
09.00	Welcome by Julie Maxton & Organisers						
09.05	Malcolm Sambridge Transdimensional inverse problems in the geosciences	13.30	Jens Timmer Joining forces of bayesian and frequentist methodology: a study for inference in the presence of non-identifiability	09.00	Christopher Bishop Model-based machine learning	13.30	Stephen Roberts Sequential non-parametric bayesian inference: approaches and applications
09.30	Discussion	14.00	Discussion	09.30	Discussion	14.00	Discussion
09.45	Simon Vaughan Time series analysis in astronomy	14.15	Mukund Thattai Using topology to tame the complex biochemistry of genetic networks	09.45	Zoubin Ghahramani Nonparametric probabilistic modelling	14.15	Michael Hedlin The study of atmospheric phenomena using seismic networks
10.15	Discussion	14.45	Discussion	10.15	Discussion	14.45	Discussion
10.30	Coffee	15.00	Tea	10.30	Coffee	15.00	Tea
11.00	Andrew Walden Rotary components and polarization ellipses: a statistical perspective	15.30	Max Little Signal processing for molecular and cellular biophysics: an emerging field	11.00	Hod Lipson Distilling natural laws from experimental data: from particle physics to computational biology	15.30	Sofia Olhede Multivariate oscillations
11.30	Discussion	16.00	Discussion	11.30	Discussion	16.00	Discussion
11.45	Neil Cornish Gravitational wave astronomy: needle in a haystack	16.15	Paul Vitanyi Similarity and denoising	11.45	Mark Girolami Statistical inference for markov jump process models via differential geometric monte carlo methods and the linear noise approximation	16.15	Aapo Hyvarinen Independent component analysis: recent advances
12.15	Discussion	16.45	Discussion	12.15	Discussion	16.45	Discussion
12.30	LUNCH	17.00	CLOSE	12.30	LUNCH	17.00	CLOSE