AAI Advanced Analytics Seminar Series on 05/10/2012

Seminar Title: The Generalised Autocovariance Function
Speaker: Professor Tommaso Proietti, Department of Business Statistics at the University of Sydney

Date and Time: 1:30pm to 3:00pm, the 5th of October 2012 (Friday)
Seminar Room: UTS Blackfriars Campus Building 05 CC05.GD.02 (5 minutes walk from the Tower Building CB01 of UTS)
Seminar Chairman: Professor Longbing Cao (longbing.cao@uts.edu.au)

Abstract: The generalised autocovariance function is defined for a stationary stochastic process as the inverse Fourier transform of the power transformation of the spectral density function. Depending on the value of the transformation parameter, this function nests the inverse and the traditional autocovariance functions. A frequency domain non-parametric estimator based on the power transformation of the pooled periodogram is considered and its asymptotic distribution is derived. The results are employed to construct classes of tests of the white noise hypothesis, for clustering and discrimination of stochastic processes and to introduce a novel feature matching estimator of the spectrum.

Short biography of the speaker: Tommaso Proietti is Associate Professor of Business Statistics at the University of Sydney, Australia, and Professor of Economic Statistics at the University of Rome Tor Vergata, Italy. His research interest is centred in the analysis of economic time series, forecasting and signal extraction in economics, and data mining.

Overview to This Seminar Series
The Advanced Analytics Seminar Series presents the latest theoretical advancement and empirical experience in a broad range of interdisciplinary and business-oriented analytics fields. It covers topics related to data mining, machine learning, statistics, bioinformatics, behavior informatics, marketing analytics and multimedia analytics. It also provides a platform for the showcase of commercial products in ubiquitous advanced analytics. Speakers are invited from both academia and industry. It opens regularly on every Friday afternoon at the garden-like UTS Blackfriars Campus. You are warmly welcome to attend this seminar series.

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