Mathematics across Disciplines Meeting

Date: Tuesday 22nd November 2011.
Start Time: 10:30am (for morning tea)
Room: Lecture Theatre 4, CBE Building 26A

Presentation 1: 11.00am

Title: Modelling the propagation of nonlinear ultrasound waves
Presenter: Bradley Treeby (College of Engineering & Computer Science)

Abstract:

The simulation of nonlinear ultrasound propagation through biological tissue has a wide range of practical applications. However, this is a computationally difficult problem due to the large size of the tissue volume compared to the size of the acoustic wavelength. In this talk I will discuss the derivation of equations describing nonlinear wave propagation in tissue, and how these equations can be discretised in a computationally efficient manner using spectral methods.

Presentation 2: 11.45am

Title: Rumortrage: Can Investors Profit on Takeover Rumors on Internet Stock Message Boards?
Presenter: Stephen Sault (School of Finance & Applied Statistics)

Abstract:

We provide the first empirical investigation into the impact of Internet Stock Message Board takeover rumors on the price discovery process in the United States equity market. Our investigation involves using an innovative five-stage filtering process, that employs computational linguistics methods, to derive a unique sample of 2,898 first post Message Board takeover rumors disseminated during the period January 2003 to December 2008, inclusive. Overall, our analysis, utilizing intraday Trade and Quote (TAQ) data, reveals that Message Board takeover rumors generate significant positive abnormal returns and trading volumes. Finally, after verifying the robustness of these results to the influence of sample selection bias and an alternative matched control firm abnormal returns metric, we find that Message Board takeover rumors present an economically exploitable opportunity for investors.

From 12:30pm - 1:00pm there will be informal discussion, followed by a casual lunch for those interested (details to be arranged on the day).