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# Bristol Meeting on Uncertainty in Structural Dynamics

20 APRIL 2006

Queen's Building, University Walk, Bristol, U.K.

<http://www.aer.bris.ac.uk/contact/academic/adhikari/BmUSD06/home.html>

# History & Motivation - 1

- This meeting is the **fifth** in the series of meetings on Uncertainty in Structural Dynamics
- The previous meetings were held in Nottingham (2002), Cambridge (Jan 03), Southampton (July 03) and Sheffield (July 04)
- The aim of these meetings was to bring together researchers working in the area of Uncertainty in Structural Dynamics in the UK

# History & Motivation - 2

The scope of the discussion includes, but not limited to:

- uncertain structural mechanics (statics, linear and nonlinear stochastic dynamics), Bayesian information processing and uncertainty analysis, possibilistic methods which include fuzzy analysis, interval analysis and convex sets, stochastic finite elements, simulation methods, sensors and health monitoring, statistical system identification and model assessment, high dimensional structures and computational issues, reliability theory and application, high frequency vibration, random matrix theory, statistical energy analysis, mid-frequency vibration.

# Objectives

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The main objectives of today's meeting are

- To update the participants on the recent developments in the area
- To decide on future research directions
- To increase collaborative works and identify industrial/academic partners (UK & overseas)
- To discuss the possibility of formalizing the existing network through an EPSRC network grant

# Bristol Meeting on Uncertainty in Structural Dynamics: Program

**Thursday April 20**

10:30	<b>Coffee available</b>	Queens Building, Pugsley Lecture Theatre Foyer
10:50	Welcome	<a href="#">Sondipon Adhikari</a> , Department of Aerospace Engineering, University of Bristol
11:00	Robust reliability of neural networks using Info-Gap models	<a href="#">Keith Worden</a> , Department of Mechanical Engineering, University of Sheffield
11:30	Analysis of active vibration reduction systems in helicopters incorporating structural uncertainty	<a href="#">Malcolm Nash</a> , QinetiQ
12:00	Wave chaos and elasticity	<a href="#">Gregor Tanner</a> , School of Mathematical Sciences, University of Nottingham
12:30	<b>Lunch</b>	Queens Building, Pugsley Lecture Theatre Foyer
13:30	Random diffuse fields in acoustics and structures	<a href="#">Robin Langley</a> , Department of Engineering, University of Cambridge
14:00	Random matrix models for structural dynamics	<a href="#">Sondipon Adhikari</a> , Department of Aerospace Engineering, University of Bristol
14:30	The bridge hill in the violin: A case study in statistical vibration prediction	<a href="#">Jim Woodhouse</a> , Department of Engineering, University of Cambridge
15:00	<b>Coffee</b>	Queens Building, Pugsley Lecture Theatre Foyer
15:30	Some applications of random matrix theory	<a href="#">Francesco Mezzadri</a> , School of Mathematics, University of Bristol
16:00	Group discussion	Everyone!
17:00	Depart	

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The meeting will be held in **Queen's Building, University Walk**, which hosts both the Faculty of Engineering and the new BLADE laboratories. Lunch/Coffee will take place in the Pugsley Lecture Theatre Foyer, and the talks in **Lecture Theatre 1.18**. A map of the university precinct can be found [here](#), Queens Building is building 62, squares F5/F6. The main entrance of the building is on University Walk.

If you need a parking space for the day, please send an email to Rachel Nee ([r.nee@bristol.ac.uk](mailto:r.nee@bristol.ac.uk)) with your car registration details.

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