



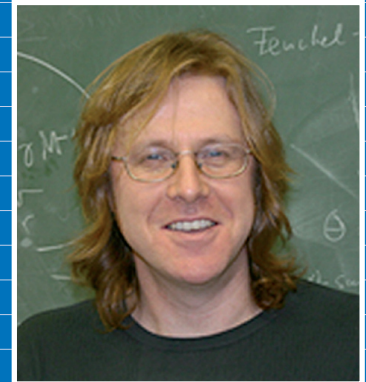
**Berlin  
Mathematical  
School**

## **BMS Friday Colloquium**

Friday, 7 May 2010, 2:00 pm

*Tea before the lecture starts at 1 pm*

BMS Loft, Urania  
An der Urania 17, 10787 Berlin



**Andrew Stuart (U Warwick):**

"Inverse problems"

In many applications it is of interest to find an input to a mathematical model, given information about the output of that model: these are known as inverse problems.

Andrew Stuart will introduce the subject with a very simple example which, nonetheless, may be used to illustrate many of the key ideas in the subject area. Along the way he will touch on basic concepts from linear algebra, optimization, Fourier series, differential equations, probability and statistics, all at a level accessible to a broad audience of graduate students in mathematics.

He will conclude with a number of video demonstrations which indicate the application of these ideas to a range of applications arising in signal processing, weather forecasting, oceanography and subsurface geophysics.

