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## ***SEMINAR OF NUMERICAL ANALYSIS***

➤ **WEDNESDAY 25 APRIL 2012 - ROOM MA A1 12 - 16h15**

*Dr. Timo Betcke, (University College London, UK) will present a seminar entitled:*

### **"Spectral decompositions and nonnormality of boundary integral operators in acoustic scattering"**

Abstract:

Nonnormality is a well studied subject in the context of partial differential operators. Yet, only little is known for boundary integral operators. The only well studied case is the unit ball, where the standard single layer, double layer and conjugate double layer potential operators in acoustic scattering diagonalise in a unitary basis. In this talk we present recent results for the analysis of spectral decompositions and nonnormality of boundary integral operators on more general domains. One particular application is the analysis of stability constants for boundary element discretisations.

We demonstrate how these are effected by nonnormality and give several numerical examples, illustrating these issues on various domains.

Lausanne, 11 April 2012 / DK/cr

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The seminars taking place at the Section of Mathematics are announced on internet address : [www  
http://mathicse.epfl.ch/seminars](http://mathicse.epfl.ch/seminars)