

臺灣大學數學系演講

Inverse Problems Seminar

演講者 : Dr Naoki Wada (Graduate School of Informatics, Kyoto University, Japan)

講題 : On inverse problem on graphs through an algebraic approach using representation theory

時間 : 2012年8月8日 (星期三) 15:00~16:00

地點 : 臺灣大學天文數學館 304 室

摘要 :

We consider an inverse problem on graphs to determine the topological structure from boundary measurements of wave propagation. After a brief introduction of relative results, we will introduce our approach through representation theory of C^* algebra.

For the problem on manifolds, it is shown that the determination of the topological structure from boundary measurements can be understood through Gelfand's representation theory of commutative C^* algebra by M. Belishev (2009). On contrast to the manifolds case, in the case of graphs the algebra is noncommutative.

In this talk we will introduce an algebra associated with the boundary measurements, and show a conjecture about a relationship between the spectrum of the algebra and the topological structure of the graphs through some simple examples.

主辦人 : 王振男(<http://www.math.ntu.edu.tw/~jnwang/ipseminar.htm>)

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