ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO THE DOCTORAL SEMINAR

An anti-maximum principle for the Dirichlet-to-Neumann operator

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Chaired by Andrii Mironchenko | Department of Mathematics

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N.2.35

ABSTRACT

Extensive literature has been devoted to study the operators for which the (anti-)maximum principle holds. Inspired by ideas from the recent theory of eventually positive C_0-semigroups, we characterise when the Dirichlet-to-Neumann operator satisfies an anti-maximum principle.

To be precise, let $\Omega \subseteq \mathbb{R}^d$ let a bounded domain with C^∞-boundary and let A be the Dirichlet-to-Neumann operator on $L^2(\partial\Omega)$. We consider the equation

$$(\lambda - A)u = f$$

for real numbers λ in the resolvent set of A. We find those d for which $f \geq 0$ implies $u \leq 0$ for λ in a (f-dependent) *left* neighbourhood of the spectral bound.

This is joint work with Jochen Glück.

We hope to see you there!

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