



MAFIA - the seminar you can't refuse

Entangling quantum dot Dirac operators and $\bar{\partial}$ -Robin Laplacians

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Trojanova 13, 12000 Praha

Abstract:

This talk addresses Faber-Krahn type inequalities for quantum dot Dirac operators on domains in $\mathbb{R}^2$. We show that this family of inequalities is equivalent to a family of Faber-Krahn type inequalities for $\bar{\partial}$ -Robin Laplacians. Thanks to this, we prove them in the case of simply connected domains for quantum dot boundary conditions asymptotically close to zigzag boundary conditions.