

Oberseminar Analysis/Numerik

Im Rahmen des Oberseminars Analysis/Numerik spricht:

**Dr. Michela Egidi
(Universität Rostock)**

Title: Sampling sets on metric graphs and bounds on the L^2 -norm of eigenfunctions

Abstract: Given a metric graph \mathcal{G} we are interested in finding geometric conditions on a measurable subset $\omega \subset \mathcal{G}$ such that $\|f\|_{L^2(\mathcal{G})}^2 \leq C(\omega, \mathcal{G}) \|\chi_\omega f\|_{L^2(\mathcal{G})}^2$, where χ_ω is the characteristic function of ω , for f being a linear combination of eigenfunctions up to a certain eigenvalue of the standard Laplacian and $C(\omega)$ a positive constant only depending on ω and, possibly, the graph.

In this talk we will consider the more general context of vector-valued functions in $L^2(\mathcal{E})$, where $\mathcal{E} = \bigsqcup_{e \in E} [0, \ell_e)$, for E a finite or countably infinite set and $0 < \ell_e \leq \infty$ for all e , and provide a condition on $\omega \subset \mathcal{E}$ such that the above inequality holds for elements in the spectral projector up to a certain energy of (several realizations of) the magnetic Laplacian on $L^2(\mathcal{E})$. Applications in control theory and the special case of quantum graphs will be discussed.

Der Vortrag findet statt am

**Donnerstag, 25.01.2024
Um 14:15 Uhr in Raum W1 0-006**

Interessierte sind herzlich eingeladen.