

Seminar of the Work Group
Nonlinear Partial Differential Equations
SS 2021

Speaker: Priv.-Doz. Dr. Gerd Herzog
July 16, 2021, 14:00 - 15:30
Zoom Link: <https://kit-lecture.zoom.us/j/7143665630>
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Spectral symmetry of solutions of boundary value problems
in Banach algebras

Abstract

For complex Banach algebras \mathcal{A} and solutions $u : [0, 1] \rightarrow \mathcal{A}$ of $u''(t) + f(u(t)) + \lambda u'(t)^2 = 0$, $u(0) = 0$, $u(1) = 0$, we outline a proof for that $\sigma(u(t)) = \sigma(u(1-t))$ on $[0, 1]$ in case that $\sigma(u([0, 1]))$ lies in a cone of the complex plane. This result is in the tradition of symmetry results on scalar nonnegative solutions of Dirichlet boundary value problems for second order ordinary and partial differential equations.