



Seminar of the Work Group
Nonlinear Partial Differential Equations
SS 2021

Speaker: Marco Gallo

May 7, 2021, 14:00 - 15:30

Zoom Link: <https://kit-lecture.zoom.us/j/7143665630>

Meeting ID: 714 366 5630

Is being lazy really that bad?
A mountain pass approach to prescribed mass problems

Abstract

The goal of the talk is to present some ideas of the variational methods that are used for solving PDEs. At first, we will see the philosophy of the Mountain Pass theorem. Then, we move to the case of nonlinear Schrödinger equations with the search for normalized solutions, namely when the mass of the particle is prescribed but its frequency is unknown. A picture of some recent techniques, involving both the geometry and the compactness of the Lagrangian formulation of the problem, will be given. Finally, we will highlight how these tools fit well the case of fractional nonlocal operators.