

SEMINAR ON APPLIED AND NUMERICAL ANALYSIS

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Speaker: Lei Zhang

Title: Concentration Phenomenon and degree counting theorems for second order elliptic systems

Abstract: For many problems in various fields of mathematics, or even different disciplines of sciences, second order nonlinear elliptic systems are often used as models. Two elliptic systems may look very similar but have drastically different structures of solutions. In this talk I will focus on the concentration phenomenon as a common feature of many systems defined in two dimensional spaces. In particular if systems are defined on Riemann surfaces I will report certain results that link the local analysis of bubbling solutions to the global, topological information of the Riemann surfaces.