Monday's Nonstandard Seminar 22

15:00

Author: Mihai Mihăilescu (University of Craiova)

Title: **A Monotonicity Property for the Principal Eigenvalue of the p-Laplace Operator**

Abstract: In this talk we discuss the monotonicity with respect to $p \in (1, \infty)$ of the principal eigenvalue of the p-Laplace operator on a bounded, open, convex domain $\Omega \subset \mathbb{R}^D$ ($D \geq 1$) with smooth boundary subject to the homogeneous Dirichlet and Neumann boundary conditions. An application of the monotonicity result is presented in relation with the study of the positivity of a minimization problem involving an inhomogeneous Rayleigh quotient. The results presented in this talk are obtained in collaboration with Marian Bocea (National Science Foundation) and Julio D. Rossi (Universidad de Buenos Aires).