Mathematical Sciences

Spring 2021

Colloquium Series

Dr. Osvaldo Méndez

The University of Texas at El Paso

Friday, February 19 | 3pm | Zoom Meeting

Click on this announcement to access the Zoom link

Eigenvalue problems for a class of Kirchhoff's equations

Abstract

The result to be presented concerns the eigenvalue problem for the general Kirchhoff's equation $-M\left(\int_\Omega |\nabla u(y)|^{p(y)}dy\right) \operatorname{div}\left(|\nabla u(x)|^{p(x)-2}\nabla u(x)\right) = \lambda |u(x)|^{q(x)-2}u(x)$, for suitable M, in the context of variable exponent Lebesgue spaces. It is proven that given a bounded domain $\Omega \subset \mathbb{R}^n$, there is a solution u with $\int_\Omega |\nabla u(x)|^{p(x)}dx = r$ for any $r > 0$. Several related problems can also be treated via the same methods.

For further information, please contact Dr. Emil Schwab, eschwab@utep.edu

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE