

## **Department of Mathematical Sciences**

## Fall 2018 Colloquium Series

September 14, 2018 at 3pm in Bell Hall 143

## Dr. Osvaldo Méndez

The University of Texas at El Paso

## A generalized Sobolev embedding theorem and applications

In a recent work we proved that under explicit, simple and optimal conditions on the Musielak-Orlicz function  $\varphi$ , the Sobolev-Musielak-Orlicz space  $W_0^{1,\varphi}$  compactly embeds in  $L^{\varphi}$ . This compactness result and its applications to variational-type eigenvalue problems will be discussed.