

**THE DEPARTMENT OF MATHEMATICAL SCIENCES**

COLLOQUIUM

# **Prof Peter J Sternberg**

Indiana University - Bloomington

**Thursday, March 31, 2016**

**Rm 140 WCharlton Hall**

**4 – 5 pm**

## **A degenerate isoperimetric problem leading to traveling waves for a Hamiltonian system**

I will discuss a simple-looking isoperimetric problem for curves in the plane where length is measured with respect to a degenerate metric. One motivation for the study is that geodesics for this problem, appropriately parametrized, lead to traveling waves associated with a Hamiltonian system based on a bi-stable potential. This is joint work with Stan Alama, Lia Bronsard, Andres Contreras, and Jiri Dadok.

Refreshments will be served 3:15 – 3:45 pm in the Faculty & Graduate Student Lounge  
Rm 4118 French Hall

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