Bi-State Math Colloquium

Who: Kevin Haertzen
When: Thursday, October 11, 4:00 pm
Where: Ottensman 122, UW-Platteville

Some Geometric Aspects of the Sturm-Liouville Problem

Finding solutions for some types of initial value problems in calculus involve integrating a function twice and then using the two initial conditions $y(x_0) = y_0$ and $y'(x_0) = y_1$ to solve for the constants. This idea is expanded in differential equations to solving so-called *boundary value problems*, which involve integrating twice and utilizing two sets of initial conditions $y(a) = y_0$, $y'(a) = y_1$ and $y(b) = y_3$, $y'(b) = y_4$ to solve for the constants. A Sturm-Liouville Problem is a type of second order differential equation with boundary conditions. We will explore a special type of these problems.

Kevin Haertzen is in his 16th year as a faculty member at UW-Platteville. He completed his Ph.D. in 2004 at Northern Illinois University, in DeKalb, IL, under the guidance of Dr. Hongyou Wu, studying Sturm-Liouville problems with regular boundary conditions that have complex eigenvalues. In his free time he enjoys reading.

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