Department of Applied and Computational Mathematics and Statistics and Department of Mathematics Joint Colloquium

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Inverse Galois Problems for Differential Equations

Just as ordinary Galois theory associates a finite group to a polynomial equation, differential Galois theory associates a matrix group to a linear differential equation. In each case, the properties of the equation are reflected in the properties of the associated group. The inverse problem asks which groups arise in this fashion. A refined version asks how these groups fit together. These questions can be asked for equations on a Riemann surface or on more general spaces. This talk will discuss progress on these questions in differential Galois theory using the method of patching, which had previously led to progress in ordinary Galois theory.

Monday, April 3, 2017
4:15 PM – 5:15 PM
127 Hayes-Healy Center

Colloquium Tea 3:45 PM to 4:15 PM Hurley Hall Globe Area