Department of Mathematics, Statistics and Computer Science
St. Francis Xavier University
Presents

Hamiltonian Partial Differential Equations: Systems of Hydrodynamic Type

By

Mr. Patrick Reynolds
Department of Mathematics and Statistics
Queen's University

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In the latter half of the twentieth century, qualitative ideas used in the study of ODEs began to be applied to PDEs; in particular, the notion of a Hamiltonian system was generalized to include PDEs. First of all, I'll introduce this idea, using Poisson brackets. Next, I'll discuss an important class of PDEs, systems of hydrodynamic type, for which the Hamiltonian property is beautifully connected with Riemannian geometry. Hamiltonian systems of hydrodynamic type, under certain severe assumptions, are very well studied; my current research focuses on relaxing these assumptions, and I hope to say a word or two about this.

Refreshments will be served before the talk in AX24A