CCSU

DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, November 22
3:00 – 4:00 PM
Maria Sanford, Room 101

THE WAVE EQUATION AND D'ALEMBERT'S FORMULA

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Abstract: The wave equation, together with the heat, Laplace and Poisson's equation, is one of the four fundamental partial differential equations (PDE's) in mathematics. Not only does it model many physical processes, from the way a string produces sound to how the electric and magnetic field interact, but it is also a model for understanding and solving hyperbolic PDE's. We will start by presenting the physical intuition in deriving the equation, after which we will show d'Alembert's method to finding an exact solution for the 1-D spatial version of the equation, under some initial conditions.

For further information:
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