

**CCSU**  
**DEPARTMENT OF MATHEMATICAL SCIENCES**

# COLLOQUIUM

Friday, October 16  
2:00 – 3:00 PM  
Maria Sanford, Room 101

## **IRONING OUT THE WRINKLES IN A BLACK HOLE HORIZON**

**BRIAN ALLEN**

**UNIVERSITY OF TENNESSEE**

**Abstract:** The idea of “ironing out”, or “smoothing” mathematical objects has been an exciting topic over the last forty years. These ideas are known as “parabolic partial differential equation techniques” and they have been applied to the distribution of heat in a room, the solution to the Millennium Prize Problem on the Poincare conjecture, and even the study of black holes. As we explore the intuition of heat flow together we will see how this simple concept, in the context of geometric evolution equations, can yield a remarkable result about black holes.

*For further information:*  
[gotchevi@ccsu.edu](mailto:gotchevi@ccsu.edu) 860-832-2839  
<http://www.math.ccsu.edu/gotchev/colloquium/>