

APPLIED MATHEMATICS SEMINAR
Department of Mathematics
State University of West Georgia
3:30 PM, MONDAY, OCTOBER 18, 2004, BOYD 301

Speaker: Dr. Scott Gordon, UWG

Title: **Optimizing Distribution of Power During a Cycling Time Trial**

Abstract.

In a cycling time trial, a cyclist's objective is to cover a fixed distance as quickly as possible without the benefit of drafting other cyclists. If the time trial course is flat and there is no wind, it seems reasonable to assume that the cyclist's effort should be distributed evenly throughout the race. I will use a simple mathematical model to show that, in the absence of such ideal conditions, the cyclist may benefit from distributing effort unevenly during the race. I will consider a course with piecewise constant grade (using Lagrange multipliers) and course of varying grade (using calculus of variations).

All faculty and students are welcome.