

## Mathematics Education Colloquium

### *Something is rotten in the state of Calc 1*

Scott Baldrige (Louisiana State University)

**Abstract:** The prototypical (and typically first) application in teaching derivatives is the instantaneous velocity problem—usually a projectile problem. It truly is an excellent model for introducing the meaning and value of derivatives. What could go wrong? In this discussion, we expose the underlying mathematics behind the instantaneous velocity model. This mathematics is almost always hidden from Calc 1 students (and their teachers), which can unintentionally generate unnecessary confusion. To remedy the situation, I will briefly mention how the mathematical works of Otto Holder (1901) and Hassler Whitney (1968) point to ways of improving the teaching of this initial example. This is joint work with Jim Madden.

Wednesday, February 6 at 10:45 AM in 612 SEO