

UCCS Department of Mathematics

# Math Colloquium Series

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**UNIVERSITY OF COLORADO AT BOULDER**



**DATE:**

TUESDAY  
OCTOBER 17, 2017

**TIME:**

12:30PM-1:30PM  
(REFRESHMENTS AT 12:15PM)

**LOCATION:**

OSBORNE A327

## The Statistical Theory of Large Deviations Way to Gamble or Invest ... If You Must

**Abstract:** The theory of large deviations helps characterize the behavior of averages far away from their expected values. Like many math subjects, the subject's journal articles grow ever more generalized and complicated. In addition to its use in frequentist statistical theory, some mathematical physicists use the subject to provide a more rigorous foundation for statistical physics.

Here, we will focus on the more mundane matters of gambling or investing ...to the degree that the latter is mathematically isomorphic to the former! We will see that large deviations provides alternative formalizations of decision criteria that weigh the potential for good returns against the risk of bad returns, and are no more difficult to implement than extant methods in wide use.

For more information please contact the UCCS Math Department at  
(719) 255-3311 [www.uccs.edu/math](http://www.uccs.edu/math)