## Department Seminar Economic Fluctuations & Statistical Physics:

Quantifying Extremely Rare and Very Common Events with Potential Applications to the Present Worldwide Crisis

Recent analysis of truly huge quantities of empirical data suggests that classic economic theories not only fail for a few outliers, but that there occur similar outliers of every possible size. In fact, if one analyzes only a small data set, then outliers appear to occur as ``rare events." However, when we analyze orders of magnitude more data (2 billion data points), we find orders of magnitude more outliers---so ignoring them is not a responsible option, and studying their properties becomes a realistic goal. We find that the statistical properties of these ``outliers'' are identical to the statistical properties of everyday fluctuations.

## H. Eugene Stanley

Departments of Physics, Chemistry, and Biomedical Engineering, BU

> **October 5th, 2011** 12:30 - 2:00 pm **Room 315** 264 Bay State Road



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