

1088-60-131

Kontantinos Spiliopoulos* (kspiliop@bu.edu), Department of Mathematics and Statistics,
Boston University, 111 Cummington Mall, Boston, MA 02215, and **Kay Giesecke** and **Richard
Sowers**. *Most Likely Path to Systemic Failure*.

In this talk, I will present recent results on modeling the dynamics of correlated default events in the financial market. An empirically motivated system of interacting point processes is introduced and we study how different types of risk, like contagion and exposure to systematic risk, compete and interact in large-scale systems. Large deviation arguments are used to approximate the tail of the default loss in large portfolios and to identify the way that atypically large (i.e. “rare”) default clusters are most likely to occur. The results give insights into how different sources of default correlation interact to generate atypically large portfolio losses. (Received February 06, 2013)