

NYU Stern School of Business
Department of Information, Operations & Management Sciences
OPERATIONS MANAGEMENT RESEARCH SEMINAR

TOPIC: Inhomogeneous Financial Networks and Contagious Links

SPEAKER: Andreea Minca (Cornell)

DATE: Friday, November 20, 2015

TIME: 10:00 AM-11:00AM

PLACE: KMC 3-80

ABSTRACT

We propose a framework for testing the possibility of large cascades in financial networks. This framework accommodates a variety of specifications for the probabilities of emergence of contagious links' conditional on a macroeconomic shock, where a contagious link leads to the default of a bank following the default of its counterparty.

Under general contagion mechanisms and incomplete information, the financial network is modeled as an inhomogenous random graph, where the conditional probabilities of contagious links depend on banks' characteristics.

We give bounds on the size of the first order contagion and testable conditions for it to be small.

BIO

Andreea Minca is an Assistant Professor in the School of Operations Research and Information Engineering at Cornell University. She studies large systems under uncertainty, especially financial systems, and uses mathematical modeling to derive optimal policies that promote system stability. She is particularly interested in structural models for systemic risk.