

**February 6, 2023**  
**2:00pm-3:00pm**  
**KAP 414**

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**(Stevens Institute of Technology)**

**Endogenous Network Valuation Adjustment and the Systemic Yield Curve  
in a Dynamic Interbank Model**

**Abstract:** In this talk we introduce an interbank network with stochastic dynamics in order to study the yield curve of bank debt under an endogenous network valuation adjustment. This entails a forward-backward approach in which the future probability of default is required to determine the present value of debt. As a consequence, the systemic model presented herein provides the network valuation adjustment to the term structure for free without additional steps required. Time permitting, we present this problem in two parts: (i) a single maturity setting that closely matches the traditional interbank network literature and (ii) a multiple maturity setting to consider the full term structure. Numerical case studies are presented throughout to demonstrate the financial implications of this systemic risk model.

**Zoom Link:** USC Math Finance Colloquium  
Time: Feb 6, 2023 02:00 PM Pacific Time (US and Canada)

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