ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DEPARTMENT
OF STATISTICAL SCIENCES
"PAOLO FORTUNATI"

Statistics Seminars 2025/2026

Giovedì 21 Maggio 2026 alle ore 14.30

Sia in presenza, presso l'aula Seminari (ex aula III) in Via Belle Arti, 41, a Bologna, sia in modalità telematica, mediante sistema di videoconferenza su piattaforma Microsoft Teams

"A Multidimensional Systemic Risk Assessment"

Prof. Ewa Dziwok

(University of Economics in Katowice)

Abstract

Systemic risk measures such as SRISK and S&CRISK quantify financial institutions' capital shortfalls under extreme stress, but they are typically designed to capture specific sources of fragility. In practice, systemic crises often emerge from the interaction of multiple shocks affecting financial institutions simultaneously. We propose N-RISK, a general framework for measuring systemic capital shortfall that accommodates an arbitrary number of concurrent stress factors. The framework allows systemic risk to arise from heterogeneous sources—including financial market disruptions, liquidity stress, macroeconomic shocks, climate-related events, or geopolitical disturbances—within a unified structure. Conditional sensitivities to these risk drivers are estimated using a multivariate GJR-DCC-GARCH model to capture time-varying exposures and cross-dependencies. The proposed measure nests existing approaches such as SRISK and S&CRISK as special cases while extending naturally to higher-dimensional settings where systemic fragility results from the joint realization of multiple risk factors. An empirical illustration demonstrates how incorporating multiple stress dimensions can alter the assessment of systemic vulnerability.

L'Organizzatore
Prof. Silvia Romagnoli

Il Direttore
Prof. Carlo Trivisano

La S.V. è invitata