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The Role of AI in Facilitating Interdisciplinary Collaboration: Evidence from AlphaFold

Professor Li Jiang

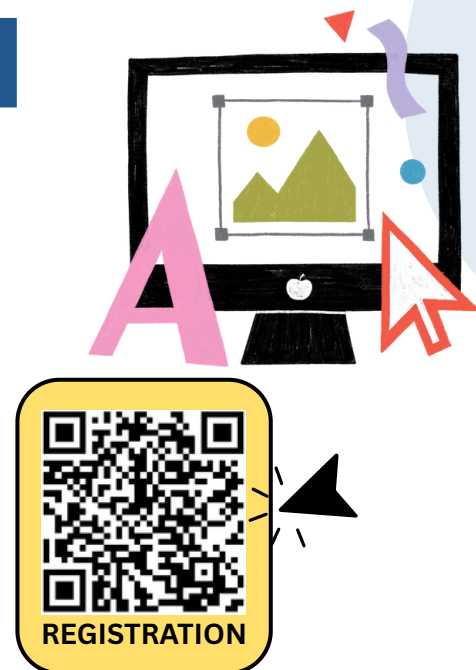
School of Information Management
Nanjing University

May 12, 2026 (Tuesday)

16:30 - 17:45

Room 204, Runme Shaw Building, HKU

Chair: Professor Chenwei Zhang



Abstract:

The growing role of artificial intelligence (AI) in science is widely recognized, and many scholars have begun to explore its impact on interdisciplinary collaboration. However, the mechanisms and extent of this influence remain unclear. This study examines how AI technologies shape interdisciplinary collaborative patterns by focusing on the impact of AlphaFold on structural biologists. Using a dataset of 1,247 AlphaFold-related papers and 7,700 unique authors from Scopus, we employed bibliometric analysis and causal inference to compare interdisciplinary collaboration between adopters and non-adopters of AlphaFold. Contrary to the widespread belief that AI facilitates interdisciplinary collaboration, our findings show that AlphaFold increased the proportion of co-authored papers between structural biology and computer science by 0.0324, while having no significant effect on other disciplines. Specifically, AI creates demand for interdisciplinary collaboration with particular disciplines due to its technical characteristics, but this demand is weakened by technological democratization and other factors. These findings demonstrate that AI alone has limited efficacy in bridging disciplinary divides or fostering meaningful interdisciplinary collaboration.

About the speaker:

Jiang Li is a Professor of Information Science at the School of Information Management, Nanjing University. His research interests include bibliometrics, the science of science, and AI for scientists. He serves as Associate Editor of the *Journal of Informetrics* and as a member of the editorial board of *Scientometrics*. He is the Principal Investigator of a major project funded by the National Social Science Fund of China (Grant No. 24&ZD321), which examines how scientific knowledge production is being reshaped by artificial intelligence.



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