

Poster List

Here is the list of all artifacts for this event. Some artifacts will have a live presentation at a specific time.

Clans in Contact: Dynasties, Parties, Distance, and the Evolution of Local Elite Networks in the Philippines

Political power in the Philippines is characterized by entrenched dynasties, fluid party affiliations, and geographically localized elite competition, yet little is known about how these actors form and sustain relational structures over time. This study examines the evolution of local elite networks across Philippine provinces from 2004 to 2016, focusing on how dynastic status, party alignment, and geographic proximity shape tie formation and persistence in a decentralized setting. Using a nationwide dataset of local elected officials, I construct longitudinal province-level networks where nodes represent political clans and ties capture institutional co-presence through co-holding local elective offices within the same municipality or city. Descriptive analysis of centrality, clustering, and cohesion highlights persistent influence among “fat” dynasties, co-partisan families, and geographically proximate actors. Building on these patterns, Temporal Exponential Random Graph Models (TERGMs) analyze network evolution across election cycles, estimating structural dependencies alongside dyadic covariates. The study provides a relational account of how local political structures persist and adapt, contributing to debates on political networks, party weakness, and governance in decentralized systems.

Jem Marie Nario, De La Salle University, Lecturer

Do university employees intend to form new collaborations as a result of their involvement in a sport event network?

Networks in higher education are recognized for their ability to enhance organizational capacity, drive innovation and analyze behaviours which affect change, all factors that potentially fuel institutional achievement. This research examines a university network that was formed as part of a four-year partnership leading up to a large-scale sport event and answers: Do university employees intend to form new collaborations as a result of their involvement in a sport event network? This work is guided by the theory of planned behavior ([Ajzen] (<https://www.sciencedirect.com/author/6701627790/icek-ajzen>), 1991). Data were collected via a self-administered questionnaire following the largest amateur multi-sport event in Canada which saw events and housing operations hosted on a university campus. Logistic regression results indicate that collaborations formed as a result of involvement in a sport event network significantly predicted future intention to form new collaborations among university employees ($B = .814$; $SE = .413$; $Wald = 3.885$, $p = .049$, estimated odds ratio of 2.257), consistent with the theory of planned behavior. The variety of actors, specifically the combination of “faculty influencers” and staff “with influence”, demonstrate a tendency towards shared power, thereby broadening information and resource exchange within the network. While it is expected staff would direct the nature of exchange within the operations area of the network, it is interesting to note the influence staff also held within the academic area.

Martha Barnes, Brock University, Associate Professor + 1 more

Evolution of Collaboration Networks in Children's Environmental Health Research Translation: A Two-Year Comparison

This study examines changes in collaboration patterns within the national Children's Environmental Health Research Translation (CEHRT) network between 2023 and 2025 using social network analysis. Two cross-sectional surveys captured three types of collaborative relationships: working closely, consulting, and discussing research translation. Network-level measures—including size, density, centralization, modularity, diameter, average path length, and component structure—were compared across the two time points. Results indicate that overall network size remained relatively stable, while total ties increased modestly across all three networks, with the largest growth in the discussion network. Network density increased over time, and both diameter and average path length decreased, suggesting improved connectivity. Most notably, the discussion network evolved from multiple disconnected components in 2023 to a single connected component in 2025, indicating increased network integration. Centralization increased in the consultation and discussion networks, while modularity decreased across all networks, suggesting reduced fragmentation. These findings demonstrate growing integration of collaborative research translation within the CEHRT network over time. Identifying key actors who facilitate these connections may inform strategies to sustain network cohesion and enhance research translation capacity.

Yuchan Cao, Keck School of Medicine, PhD student

Invisible Boundaries: Measuring Poverty Stratification through Chicago's Spatial Adjacency Network

Chicago is a classic model of spatial inequality. While Sampson's neighborhood theory emphasizes how community structure shapes urban inequality, few studies systematically quantify how citywide relational structures across all 77 Community Areas (CAs) reinforce poverty stratification. This study investigates: 1) whether Chicago communities exhibit poverty-based assortative clustering, and 2) whether these network structures limit resource exposure for disadvantaged areas. The study constructs a one-mode binary network of 77 CAs based on geographical adjacency. 1. Network Assortativity Analysis: Using ACS data, CAs are categorized by poverty levels. I employ network visualization and the assortativity coefficient to identify "invisible income boundaries" and determine if impoverished communities form homophilic clusters. 2. Weighted Resource Exposure: To measure resource flow, I construct a directional weighted network where a tie from community i to j is weighted by the public resources available in j . By calculating the average resource exposure (mean resource level of neighbors), I quantify each CA's structural position within the urban resource landscape. I expect significant positive assortativity, indicating that poor neighborhoods are spatially locked into disadvantaged clusters. Lower resource exposure in these clusters will exemplify how urban network architecture reproduces poverty through spatial isolation and resource segregation.

Tom Chen, University of Minnesota · Contract, Graduate Teaching Assistant

Mapping a greenhouse technology ecosystem: Insights and strategies for strengthening innovation

The greenhouse sector is comprised of many stakeholders that are bound together by shared interests in a set of technological innovation processes and outcomes. Innovation intermediaries are the organizations that link and facilitate sustained interactions among technology producers and its users in a given sector or domain. Such networks often consist of program/service funders and deliverers, post-secondary research institutes, technology developers and entrepreneurs, and program/service beneficiaries/end-users such as farmers. This research project used social network analysis to map a public-service-delivery ecosystem in Ontario, Canada to understand the role of innovation intermediaries in the greenhouse sector. Doing so allowed for the identification of network actors, their network location, and level of connectedness across nine (9) types of innovation. Data were collected via a self-report questionnaire. Results indicated that most actors were private sector organizations with operations national in scope. Innovation ties were not balanced as most relationships related to research and development (50 ties) and validating/prototyping new technologies (44 ties) over advocacy (3 ties) and interoperability standards promotion (1 tie). Social network metrics contribute to our understanding of overall structure. Implications from this research will inform how intermediaries can support and improve the uptake of technology and innovation in the sector.

Martha Barnes, Brock University, Associate Professor

Social Network Analysis of Transboundary Water Governance in the Kura-Aras Basin

The Kura-Aras River Basin, shared by Iran, Türkiye, Azerbaijan, Georgia and Armenia, is a transboundary water system necessary for water security and cooperation. Despite complex political dynamics, formal institutions, technical committees, and international organizations have emerged to facilitate water management and infrastructure. This study utilizes a social network analysis (SNA) to map institutional and expert networks involved in water governance within the Kura-Aras Basin. Drawing on public data, including academic literature, media sources, and organizational publications or reports, we will identify key actors, their relationships, and patterns of collaboration in joint agreements and infrastructure. This analysis will highlight potential gaps in water governance among stakeholders, such as in institutional engagement and cross-sectoral coordination, offering insight into how strengthening transboundary networks can build resilience in water governance infrastructure amidst political tension. Additionally, the study emphasizes the importance of network analysis as a method of enhancing cooperative management in shared water basins.

Saira Erfan