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Advances in innovation and network research

Iris Wanzenboeck, Maryse Chappin, Frank J. van Rijnsoever *Utrecht University, Copernicus Institute of Sustainable Development*

Innovation is important to economic growth and tackling grand societal challenges, and networks have proven to be crucial for the development, implementation, and diffusion of innovation. Current debates in the literature on network and innovation revolve around:

- The process of partner selection and formation of innovation networks
- The structure of policy-induced innovation networks
- The dynamics of innovation networks over time and/or space
- The role of networks in open innovation
- The multiple levels of observing and analyzing innovation networks
- The observation of innovation networks using big data

This session gathers the most recent advances in network research devoted to innovation. We welcome high quality contributions on the listed topics. Other relevant advances in the field are also encouraged. We are open to contributions using different perspectives and methodological approaches.

Advances in multilayer network analysis: methods and applications

Matteo Magnani, Giancarlo Ragozini, Luca Rossi, Maria Prosperina Vitale Uppsala University

Social network analysis (SNA) and agent-based modelling (ABM) provide two approaches for studying the dynamic interaction between people and with social behaviour. SNA explores the mechanisms that form the basis for network relations (e.g. homophily, reciprocity, clustering) and provides a structure to understand the impact of these relations for outcomes such as: health behaviour, career progression, or innovation. ABM allows for testing of mechanisms for network generation and exploration of social macro-phenomena (e.g. the emergence of opinion alignment) from individual behaviour inputs. This special session aims to bring together research that links these approaches.

Questions of interest include:

- 1) How can ABM help identify mechanisms that contribute to network structures?
- 2) What are the implications of network structures for social phenomena?
- 3) How can we combine SNA and ABM data collection?
- 4) Case studies that integrate ABM and SNA methods to analyse a specific issue.

Advances in Socio-Semantic Network Analysis

Johanne Saint-Charles, Iina Hellsten, Camille Roth, Nikita Basov, Andina Nerghes *Université du Québec à Montréal*

People, groups and organizations are linked (or separated) not only by their social ties but also by their discourse. In recent years, scholars have explored the interplay between the two through a network perspective shedding new light on how the social and the cultural are intertwined, how meaning and relationships coevolve, how cognitive and relational structure affect one another and so on. This emerging framework where semantic and social network data are being jointly appraised still poses a number of theoretical and methodological challenges.

This organized session will consist of two parts: (1) a regular session where papers will be presented and (2) a panel, where session presenters will be invited to discuss topical issues in socio-semantic network analysis. The purpose here is to stimulate open discussion on relevant issues in socio-semantic network analysis. The pivotal issues will be proposed by the organizers based on the abstracts received.

Agent-based models: Linking complex social phenomena to social network dynamics

Andreas Flache, Jennifer Badham, Filip Agneessens, Federico Bianchi

Computational agent-based modelling (ABM) has established itself as an approach to elaborate and analyze the complex interplay between micro-behavior and macro-structure that occurs in the emergence of social networks from individual relational decisions. ABM construes agents as autonomous, yet interdependent decision makers, driven by rules that span from simple heuristics to more or less sophisticated boundedly-rational choice or cognitive processes. Increasingly, the ABM literature addresses the dynamics of social networks as a crucial element in processes that bring about complex macro-level phenomena like opinion polarization, social and residential segregation, cooperation and conflict in organizations, gossip and reputation structures, social inequality, or status dynamics.

Questions of interest include:

- 1) How can ABM help identify mechanisms that contribute to network structures?
- 2) What are the implications of network structures for complex macro-level social phenomena?
- 3) How can we combine SNA and ABM data collection?
- 4) Case studies that integrate ABM and SNA methods to analyse a specific issue.

Analysis of longitudinal personal and small social network analysis

Luisa Barthauer, Lisa Handke, Elena Stasewitsch *TU Braunschweig*

While temporal processes are inherently dynamic phenomena, research has widely treated them as static, higher-order constructs (e.g. Kozlowski, 2015; Leenders, Contractor, & DeChurch, 2016). In order to address this gap, we need to analyze their emergence from individual interactions as well as their trajectory over time. As these kinds of processes can be conceptualized as relational event networks, this symposium focusses on temporal processes in personal and small groups' dynamics via longitudinal network analysis. In this context, we want to address the issue of change in personal and small group networks from a conceptual as well as methodological perspective.

We welcome researchers to submit their empirical or theoretical work concerning the longitudinal analysis of personal and small social networks to this session to join the discussion on how to best analyze personal and small social networks sampled at more than two or three measurement occasions.

Analysis of weighted networks

Luisa Barthauer, Lisa Thiele, Elena Stasewitsch, Britta Wittner, Till Krenz *TU Braunschweig*

The types of ties between two persons or entities can vary from unweighted (e.g. present vs. absent) to weighted (e.g. weak, medium, strong). The majority of the analyses has focused on unweighted ties since the analysis of weighted ties appears to be more elaborate (Newman, 2004; Opsahl, Agneessens, & Skvoretz, 2010). However, weighted network data is richer in information and can facilitate answering more comprehensive research questions, for instance regarding the speed innovation is spreading at within an organization. At the same time weighted ties lead to complications in the interpretation of some traditional network measures. The aim of this session is to focus on methodological and empirical work concerning weighted network analysis of social ties to discuss how weighted network data can be helpful in answering cross-sectional and longitudinal research questions. The types of networks can vary from one- to two-mode networks in sociocentric as well as egocentric networks.

Biomarkers in Social Network Research

Brea Perry
Indiana University

There has been a growing emphasis in the social and biological sciences on understanding how the social environment "gets under the skin." At the same time, technological advances have made it increasingly feasible to collect biomarkers in the context of community-based research, leading to significant advances in models of human aging, health, cognition, and behavior. This session seeks papers that integrate biomarker data (i.e., measurable indicators of a biological state) with social network theory or methodology, broadly defined, in any substantive area. Topics might include gene-environment interactions, epigenetic response to social conditions, social networks as moderators of biological processes, or social network epidemiology through stress and inflammation.

Challenges in archaeological and historical network analysis

Martin Stark, Aline Deicke, Lieve Donnellan, Matthias Bixler *ILS – Research Institute for Regional and Urban Development.*

Over the last decades, network analysis has made its way from a fringe theory to an established methodology in archaeological and historical research that goes beyond a purely metaphorical use of the network term. A substantial number of studies on different topics and periods have shown that network theories and methods can be fruitfully applied to selected bodies of historical and archaeological sources. Yet in many of these initial studies, important methodological concerns regarding the underlying sources, missing data, data standardization and representation of networks in space and time have not been adequately acknowledged and sometimes even completely neglected.

The session invites contributions from researchers applying methods of formal network analysis in archaeological or historical research. A special emphasis of the session will be on the unique challenges that arise in the domain-specific application of these research methods. We welcome submissions on any period, geographical area or topic.

Changes in Ego-Centered Personal Networks: Causes, Differences and Consequences

Gerald Mollenhorst

Utrecht University, dept. of Human Geography and Spatial Planning

Personal relationships and the composition and structure of personal networks are very dynamic. Many studies based on ego-centered network data have confirmed this notion, both for the short run and over the course of people's lives. Comparatively little is known about:

- (a) causes of these network changes, which may be found on multiple levels, including the individual level (e.g., life course transitions; strategic choices), the network level (e.g., structural network embeddedness), and the contextual level (meeting opportunities; institutional conditions; cross-national variations);
- (b) differences between social groups (e.g., related to age, ethnicity or subcultures);
- (c) consequences of network changes (e.g., changes in social capital that affect individual life chances; social cleavages that affect social cohesion and solidarity, etc.).

I invite original contributions on these issues related to ego-centered personal networks. Contributors may address theoretical perspectives, empirical findings, innovative methodological approaches/issues, and/or methodological concerns that affect research findings and conclusions.

Changing policy networks, changing policy outcomes over time?

Maria Brockhaus, Monica Di Gregorio University of Helsinki

Climate change and extreme weather events across the globe call for major societal responses. With the Paris agreement, countries are supposed to provide nationally determined contributions, and performance-based mechanisms (among others, REDD+) were encouraged under the agreement. Processes of transformational change within and across policy domains and networks are required to realize effectively, efficiently and equitable emission reductions and increased adaptive capacities. We see new discourses emerging, and new actors entering new policy coalitions, joining efforts to break away from current business as usual pathways. However, barriers and resistance within policy networks towards such changes are also visible. This session calls for contributions that analyze climate policy networks and their characteristics to understand the emergence (or lack) of new policies and outcomes to achieve climate goals. In particular we call for contributions that take comparative and longitudinal perspectives when analyzing climate policy networks.

Collaboration networks and knowledge diffusion

Maria Prosperina Vitale, Giuseppe Giordano, Giancarlo Ragozini *University of Salerno*

Collaboration networks attract a lot of attention in many fields and their analysis is considered a key element in the assessment of knowledge diffusion in several scientific domains. The session has the objective of presenting theoretical and methodological developments in the areas of collaboration networks to propose approaches to describe collaboration networks in different fields, to analyze collaboration networks in presence of multiplex and multilevel structures, and to deal with collaboration data extraction and data collection.

The organizers solicit the submission of papers dealing with theoretical and methodological challenges of collaboration networks. Topics of interest include, but are not restricted to:

- Academic and scientific collaboration networks
- Analysis of co-authorship and citation networks
- Analysis of collaboration networks in economics and social environments
- Community detection and structure in collaboration networks
- Dynamics and evolution patterns of collaboration networks
- Mixed methods for collaboration networks
- Multilevel collaboration networks
- Multiplex collaboration networks
- Sources of collaboration data

Comparing political networks over space and time

Manuel Fischer, Petr Ocelik *Eawag*

Comparing political networks over space and time is a powerful strategy to support causal explanations on the antecedents or consequences of network structures. Comparisons over space can include cross-country comparisons or within-country comparisons across regions or policy sectors. Comparisons over time can involve network observations at several discrete time points, or can be based on the dynamic assessment of network evolution. Despite of the potential benefit of such comparisons to our understanding of political networks, the functioning of political systems, public policy-making, and so on, empirical applications of such research designs have remained rare. A main reason for this is the relative difficulty and costs of gathering comparable data on political networks. This panel is endorsed by the ECPR (European Consortium of Political Research) Standing Group on Political Networks.

Corporate Networks and Politics

Joshua Murray, Tarun Banerjee, Eelke Heemskerk, Roy Barnes *University of Michigan-Flint*

This series of sessions is organized around the theme of Corporate Networks and Politics - that is, how do corporate networks shape the political behaviors within and between firms? The papers within this track broadly examine the politics around firm engagement with the state and civil sphere. More specifically, the papers within these sessions will address the theme of firm networks and politics, including the political causes and consequences of corporate networks; local, national, and global dynamics; political mobilization within and between firms; and changes in network structures.

Egocentered networks: New questions, research, and applications

Miranda Lubbers, Jose Luis Molina, Beate Volker, and Mario L. Small

Recent years have seen a resurgence of research on egocentered networks. Conferences in Europe and the U.S. have focused specifically on the topic; software packages such as EgoNet, Vennmaker, egonetR, and others have been developed, and Netcanvas is advancing at a good pace; nationally representative surveys collecting ego network data have proliferated in the U.S., Europe, and Asia; journals have issued calls for papers; and new papers and books from both quantitative and qualitative perspectives have examined the foundations of interpersonal relationships from egocentric perspectives. What have we learned from such works? What applications have such perspectives made possible? What new questions have emerged? We seek innovative papers that understand social networks from the perspective of the individual. We are particularly interested in papers that examine decision-making processes, cognition, contexts, reciprocal relations, support, mobilization, migration, or that develop methodological or conceptual innovations.

Egocentric Network Analysis: Advances in Data Collection and Analysis

Ann McCranie, Erin Pullen
Indiana University Network Science Institute

We are interested in recent developments in the collection and analysis of egocentric data, such as: name generators, sampling methods, field methods, decision-making models, mixed method approaches, and in-depth studies of meaning. Other works that address novel uses or advances are welcome, as are efforts to improve reliability and validity in egocentric research.

Empirical Studies of the Micro-Macro Link

Christian Steglich
ICS Groningen & IAS Norrköping

One of the classical reasons for engaging in social network analysis is to arrive at an understanding of the functioning of a social system as it reveals itself in the interdependencies among the social actors that constitute it. As such, social network analysis lies at the intersection of empirical data analysis and the micro-modelling of macro phenomena. This intersection position holds especially for "generative" statistical network models (Epstein, 2006), including but not limited to exponential random graph models (ERGMs, Lusher, Koskinen & Robins, 2012) and stochastic actor-oriented models (SAOMs, Snijders, van de Bunt & Steglich, 2010). In this session, we aim to collect contributions that build on empirical data to study the micro-to-macro link. We welcome any study that investigates macro (i.e., network-level) outcomes and takes effort to calibrate the generative models to empirical settings (Bruch & Atwell, 2015).

Experiments and networks

Vincent Buskens

Department of Sociology / ICS, Utrecht University

Causal relations are often difficult to establish in social network research, because measurement of social networks certainly over time is in many contexts difficult. Experiments are a well-suited tool to test, at a small scale, theoretical predictions on the effects of social networks and the antecedents of emergence of certain networks. In such experiments, also behavioural mechanisms can be tested that might affect consequences of network structures and emergence of networks. For this session, we invite researchers to submit papers that use experimental methods (field or laboratory) to test causes or consequences of network structures.

Family and Personal Networks through the Life Course

Marlène Sapin, Vera de Bel FORS & LIVES, University of Lausanne

Life-course trajectories and transitions are embedded within complex webs of family and personal relationships. These networks may provide individuals with resources helping them to deal with life events and situations. However, these networks, depending on their composition or pattern of interactions, do not only provide social capital and exert positive influence. Individuals' life chances might be limited by increasing stresses or strains. Family and personal networks change over time, which can have tremendous consequences on individuals' resources, behaviors and life chances.

This session invites papers on family and personal networks focusing on situations where family relationships play a significant role in various life-course issues. Papers with a longitudinal design are encouraged to be submitted, but cross-sectional studies on life transitions or stages are also welcome. Quantitative as well as case study research on specific normative or non-normative life events are also of interest to this session.

Field Change

Daniel McFarland, Omar Lizardo Stanford University

The intersection of networks and culture is of growing interest as access to big data on text and linkages becomes ubiquitous. This session focuses on change in fields of knowledge to explore this intersection. Fields of knowledge entail both relations of meaning and persons in interaction. The patterns of these relations establish topographies of affiliation and social understanding. In some instances these result in schools of thought, thought styles, thought communities, intellectual movements, stable topical areas, and "subtexts" of thought that persist in the background. What methods identify such field variation; what captures its change and reproduction? What forms of reorganization enable continued field expansion? What practices and mechanism create instances of uneven development such that some subgroups expand and colonize the field? In this session presenters will bring to bear recent advances in text analysis and large-scale longitudinal network analysis to fundamental questions about field change.

Guanxi Networks

Yanjie Bian

Institute for Empirical Social Science Research, Xi'an Jiaotong University

This session is designed for presentations of the most recent research of guanxi networks. Research problems are not limited to the contents, structures, and dynamics of guanxi networks themselves, but also about the roles of guanxi networks in social, economic, and political spheres. Both qualitative and quantitative studies are welcomed to submit, so far as they are substantively interesting and theoretically informed.

Health Care Provider Networks

William McConnell Indiana University

Latent professional networks among physicians and other medical professionals exert a hidden influence on health care delivery. Physicians' professional relationships have been linked to prescribing behaviors, adoption of innovative technologies and practices, and the costs and quality of care received by patients (Barnett et al. 2012, Medical Care; Pollack et al. 2012, J. General Internal Medicine). Recent research has developed methods to derive health care provider networks from routinely collected electronic medical records (EMR), such as health insurance claims (Barnett et al. 2011, Health Services Research). In this relatively novel area, further research is necessary concerning the collection, conceptualization, and analysis of health care provider networks based on EMRs. Presentations in this session will address the use of EMRs to characterize professional networks within health care systems. Presenters will examine health care provider network formation, dynamics, and the mechanisms through which networks affect care delivery to patients.

Innovations in social network based interventions

Kate Eddens

Indiana University Network Science Institute

The area of network-based intervention research has seen tremendous progress in recent years with developments in methods, technology, analysis, and application. This session will offer a forum to present innovations in network data collection methods or tools, sampling approaches, incentives, intervention targets or topics, data analysis, network visualization, and use of technology for network-based interventions. Unique applications of networks within broader interventions are welcome, as are both personal network and sociometric network interventions.

Inter-organizational networks and sustainable cooperation

Francesca Giardini, Liesbet Heyse, Rafael Wittek *University of Groningen*

Interorganizational networks are assumed to be solutions to complex coordination challenges in the private, public or nonprofit sector. For example, the decentralization of social care provision in Western Europe resulted in networked cooperation between care providers, client groups and government institutions. The extent to which different organizations might support cooperation over time and across different tasks depends on their governance structure, but also on more emergent network mechanisms. The aim of this session is to discuss recent work on interorganizational networks and their effectiveness in promoting cooperation among actors with different interests and missions, especially when they have to face external shocks or unintended negative side effects of cooperation. Is it possible to identify specific structures that are more effective in sustaining cooperation? Which mechanisms are better in sustaining cooperation? Can we design and govern networks in order to make them more successful in keeping high cooperation levels over time?

Intergroup Relations in Social Networks: Causes of Segregation

Lars Leszczensky, Tobias Stark, Hanno Kruse, Sebastian Pink *MZES, University of Mannheim*

More and more researchers use social network analysis to study intergroup relations. Various methods, including ego-centered, cross-sectional (ERGM), and longitudinal (SAOM) network analyses show that friendship networks are segregated along ethnic, cultural and religious lines. However, research has only begun to exploit the potential of social network analysis for understanding the causes and processes leading to segregation. Even fewer studies exist on interventions that aim to reduce segregation and promote positive intergroup relations. This is partially due to theoretical and methodological challenges that are specific to the network approach. For instance, people may identify with multiple groups, intergroup contact preferences contact may vary between groups, and members of multiple groups in a network have to be modelled at once.

This session invites theoretical, methodological, and empirical contributions that address these and other challenges in order to deepen our understanding of how segregation arises, with a focus on intergroup relations.

International taxation in the post-crisis era

Javier Garcia-Bernardo University of Amsterdam

The recent crackdown on tax havens, secrecy and corporate tax avoidance have been accompanied by new corporate strategies on tax and finance in order to cope with new regulatory requirements, as well as new government strategies to attract and sustain foreign capital. We are witnessing a reconfiguration of the classical `race to the bottom' on corporate taxation, where jurisdictions and multinationals increasingly utilize sophisticated legislation in their benefit.

This session seeks to explore the interplay of these new trends in this new environment. By modeling the network of legislation between countries (such as tax treaties, withholding taxes or exchange of information) at the same time of analyzing at the reconfiguration of corporate structures (trees of parent ans subsidiaries), the session aims to determine the key determinants in corporate taxation and the key jurisdiction driving the new race to the bottom.

Issue emergence in environmental politics

Jenniver Bansard, Ina Möller *University of Potsdam*

The environment is one of the most complex areas of contemporary politics. It is fueled by the constant identification of new problem areas and is driven by considerable knowledge production streams. In this context, some issues remain under the radar while permeate multiple policy fields. One example is the concept of ecosystem-based management, which is now being applied in the fields of mitigation, adaptation and disaster risk reduction. We argue, that rather than the issues' intrinsic properties, it is the actors and the networks in which they operate that drive their institutionalization – inter alia through processes of framing and reframing. Building on this consideration, this panel welcomes papers that address questions around the constituents, processes and effects involved in moving an issue or concept up the political agenda.

Missing Data: Effects and Treatments

Robert Krause, Mark Huisman *University of Groningen*

Missing data constitute a key issue for virtually all methods of network analyses. Most descriptive measures and statistical model families (e.g. ERGM, SAOM) suffer under actor- or tie-nonresponse, because of the inherent dependency within networks. Missing data do not only reduce power, but also bias model parameters and descriptive measures (e.g. centrality indices), even if the data are missing completely at random. Research on data studies whether and under which circumstances biases occur, how large they are and which methods are most suitable to handle them. Several important advances in the field have been made in recent years in understanding the consequences of missing data (Smith et al., 2013, 2017) and the effectiveness of treatment methods (Huisman & Krause, 2017; Koskinen et al., 2013; Wang et al., 2016).

This session is open for methodological, theoretical and empirical studies that focus on the effects or the treatment of missing data.

Mixed Methods Network Studies

Betina Hollstein, Mireia Bolibar *University of Bremen*

From the outset, network research has made use of qualitative data, less structured approaches to data collection, and interpretive methods in analyzing social networks. However, it is rather a recent phenomenon that researchers systematically combine structured network data with qualitative accounts. A smart combination of quantitative and qualitative data and quantitative and qualitative strategies to data analysis can improve the quality of data and enhance the explanatory power of results. Moreover, mixed methods studies promise to provide empirically sound contributions to current issues, especially concerning the processes, dynamics and effects of social networks.

In this session we want to discuss theoretical, methodical and empirical aspects of mixing methods in network studies and the challenges and benefits for network research. We invite presentations on mixed methods research designs, mixed methods data collection, data analysis and empirical contributions of mixed methods studies.

Modeling Network Dynamics

Christoph Stadtfeld, James Hollway, Tom Snijders *ETH Zurich*

Important insights into social networks can be obtained with the help of longitudinal observation designs. Such designs can be of a varied nature. Panel data is the structure used traditionally for self-reported networks; regular time series and time-stamped data can be obtained from official or automatic records; but this does not exhaust the types of longitudinal network designs. Corresponding to these differences in data collection, a variety of longitudinal methods of analysis have been developed, such as continuous-time actor-oriented and tie-oriented models for panel and time series data, network autoregressive models for time series at regular intervals, and network event models for data with a fine-grained time resolution. Some of these methods are based on actor-oriented models, others on tie-oriented models.

This session will be open to methodological as well as applied presentations about models for network dynamics as long as they are relevant for empirical social science.

Multilevel Network Approaches in Organizational Research: Theory, Applications, and Methods

Spyros Angelopoulos, *Tilburg University* Francesca Pallotti, *University of Greenwich* Paola Zappa, *National University of Ireland*

The multilevel nature of organizations creates a complex ecosystem where individuals, groups, units, practices, and other organizations are entangled. Such entanglement shapes organizations in a dynamic way, and affects their outcomes at multiple levels. This session focuses on recent advances in modeling and understanding networks in and around organizations from a multilevel perspective. Possible examples of networks include, but are not limited to:

- Corporate networks
- Communities of practice networks
- Entrepreneurial networks
- Innovation networks
- Collaboration networks
- Investments networks
- Online networks.

while a non-comprehensive list of perspectives is:

- Multilevel network analysis
- Multilevel analysis of networks
- Dynamics of Multilevel networks
- Diffusion processes in multilevel networks.

We welcome both theoretical and empirical contributions that address the various aspects and implications of the multilevel nature of networks, while we are also interested in methodological advances and software development in the area of multilevel networks.

Negative Ties and Signed Graphs

Giuseppe Labianca, Patrick Doreian, Filip Agneessens, Joshua Marineau, Nicholas Harrigan, Alexandra Gerbasi, Karoly Takacs *University of Kentucky*

Researchers are now increasingly aware of the co-existence of positive and negative ties in networks and the need to study them together so as to get a more accurate portrait of the networks' contents and dynamics. We, therefore, extend an invitation to submit abstracts for a session on Negative Ties and Signed Graphs. We encourage a wide range of submissions. Example work includes (but is not limited to): Methods and measures pertaining to negative ties and signed graphs; understanding structural balance processes; understanding how threats within a network create needs for allies, and the implications for nodal power; examining where bullying and victimization emerges in schools or organizations; how perception of negative ties poses unique challenges in organizational research; the antecedents and consequences of relational ambivalence; political networks in government and international settings; and how subgroup fault lines affect intra- and inter-group conflict.

Network Approaches for Understanding Collaborative Environmental Governance

Jacob Hileman, Örjan Bodin Stockholm Resilience Centre

The growth in collaborative approaches to environmental governance has resulted in increasingly complex and fragmented institutional arrangements, which are characterized by the existence of multiple decision-making venues and involve a range of diverse public and private actors. In this session, we investigate the network structures of actor and venue relationships across a range of empirical policy systems, with a focus on how these governance networks form and how they function. Understanding strategies for working within fragmented institutional arrangements is key to improving the efficacy of collaborative environmental governance, where the benefits of policy and management actions across fragmented institutions often fail to accumulate.

Network Approaches to Language, Sociocultural Interaction, and Relational Sociology

David Elliott *University of Missouri*

Language, meaning, the local contexts of interactive spoken or written communicative events, and the sociocultural formations that serve as the broader contexts of such events are key to a network approach to relational sociology and to relational studies in other disciplines. This session welcomes a diverse range of studies that apply social network analysis theory or methods (whether quantitative, qualitative, or mixed) to such areas as the following, though not limited to them:

- interactive spoken or written communicative events, including their patterning and dynamics;
- turn-taking and other sequencing in spoken or written discourse;
- the patterning and dynamics of sociocultural or purely cultural formations in isolation and in their interrelations;
- the analysis of textual or intertextual structures that may use various levels of analysis from words to clauses on up to entire texts;
- other linguistic, sociolinguistic, anthropological linguistic, and socio-semantic areas of study

Submissions may be primarily empirical, theoretical, or methodological.

Network Ecology: Bringing Context in

Malte Doehne, *UZH - University of Zürich* Daniel McFarland, *Stanford University*

Social networks are embedded into cultural, institutional, and material settings that affect tie formation processes and the resulting network topologies. For example, romantic entanglements are subject to cultural norms, firm alliances are regulated by country-specific legislation, and adolescent friendships are conditioned by classroom settings and neighbourhood effects. The aim of this session is to showcase research that examines in detail whether and how various features of the social environment shape network structures by affecting the nature and quality of interactions and relationships. We welcome contributions from a broad range of perspectives, including case-studies, multilevel network analyses, and conceptual contributions that bring into focus the different contexts in which ties are formed and the macro-properties of the resultant networks.

Network Science & Law

Fabien Tarissan, Wolfgang Alschner, Urska Sadl CNRS

Scholars from a variety of disciplines increasingly use network analysis to study law and courts. Still, the diversity of the methods applied is overwhelming and the value of the approach compared to traditional legal research remains difficult to assess.

In this session we aim at exploring the promises and perils of a network analysis of law by combining insights from legal scholarship and perspectives from computational social sciences in order to assess network analysis's potential for better understanding legal phenomena. The session welcomes both theoretical work and empirical applications of network theories and social network analysis to any question related to the legal domain. Possible topics include (but are not limited to) the study of legal citation networks, the social network of adjudicators or lawmakers or the semantic connections of legal texts.

Networked Innovation

Julia Brennecke, Dean Lusher Swinburne University of Technology

Innovation is no longer the property of stand-alone corporate or government R&D laboratories. Rather, it is the property of networks, where innovation occurs at the interstices of organisations, large and small, public and private, and the individuals nested within. These networks operate at intra- and inter-organisational, regional, national and international levels – this is networked innovation.

However, many questions about networks and innovation remain unanswered. The purpose of this session is to present the newest insights into the drivers, structural features, and consequences of innovation networks at different organizational levels.

Examples include:

- * Interactions between intra- and inter-organizational networks for innovation
- * Network dynamics and innovation diffusion
- * University-industry collaboration
- * Networks and commercialization
- * Innovation in public sector firms
- * Barriers to innovation

We welcome empirical contributions that tackle such issues, using various data sources and a variety of methodological approaches.

Networks and market norms

Guillaume Favre, Julien Brailly, Fabien Eloire, Emmanuel Lazega, Elise Penalva, Alvaro Piña Stranger, Paola Tubaro *Université de Toulouse*

This session aims to explore the social norms and processes that structure markets. In our mind, networks model the relational interdependencies between actors at individual, organizational or inter-organizational levels. They are essential in business life and in the division of labor. They highlight the ways in which relational structures sustain forms of collective actions. These kinds of actions are generally described through social processes such as: regulation, socialization, social control, innovation, bounded solidarity, social comparison and stratification, etc.

We encourage a wide range of submissions using various sources of data: studies of culture, practices and norms implemented in markets through relational structures, cases of social processes at organizational or inter-organizational levels, etc. The interdependencies between actors can be described here thanks to sampling of ego networks or collecting complete networks. The paper should contribute to the description and analysis of relational social processes such as that cited above.

Networks and Mental Illness

Ann McCranie, Bernice Pescosolido

Indiana University Network Science Institute

From the role of factors implicated in the onset of mental illness through the factors that shape reentry and recovery into the community, networks have been front and center in providing basic and applied insights. This includes the role of connectedness in the epidemiology or recognition of mental problems; tracing networked pathways to care; exploring treatment-based networks; seeing how community networks react to treatment; and forging organizational networks that attempt to fill in the cracks in the system. Presentations that address this and other issues of mental illness and networks are welcome.

Networks and the Labour Market

Dafne Muntanyola, Mattia Vacchiano, Stefan Bernhard Universitat Autonoma de Barcelona - Centre d'Estudis Sociològics sobre la Vida Quotidiana i el Treball (QUIT)

Since Granovetter's work on the importance of weak ties to find a job, the role of social networks in the labour market has attracted widespread attention. The importance of social capital in the labour market outcomes has been also widely addressed by Bourdieu, Lin or Burt just to name a few seminal authors. However, several issues are still underdeveloped in both theoretical and methodological terms, such as the problem of agency in SNA, the role of negative ties in the job market and how class and gender inequalities shape the mobilization of social capital.

If you are interested in these questions, please consider submitting an abstract on any of these following topics (not limited to them):

- Social capital and status attainment
- Personal networks' dynamics and labour trajectories
- Migrant populations and labour networks
- Social networking and job seeking strategies
- Networks, recruitment strategies and labour market segmentation

Networks, Collective Action, and Social Movements

David Tindall, Mario Diani

Department of Sociology, University of British Columbia

We welcome proposals for papers on theoretical, substantive, and methodological aspects of networks, collective action, and social movements. This session is being organized in collaboration with the Standing group on Political Networks of the European Consortium for Political Research.

Networks, Culture, Interaction

Jan Fuhse Humboldt University of Berlin

Relational sociology conceptualizes social networks as interwoven with culture and as negotiated and changing in interaction. The session gathers presentations that follow this lead and investigate the connections of social networks with culture and / or interaction, both conceptually and empirically. Starting with the work of Harrison White, relational sociology has come to treat networks not as a-cultural structures, but as patterns of relationships that variously build on, and incorporate cultural forms. In turn, culture is diffused and negotiated in social networks. More recently, social networks have been dissolved into processes of interaction, and reconstructed as patterns in this process. Social relationships and networks thus consist of regularities in communicative events, stabilizing, reproducing, and changing over their sequence. Rather than studying networks as clear-cut, stable arrangements of ties, we have to observe the sequential and relational ordering of communicative events.

Networks, evidence and expertise in politics

Jordan Tchilingirian, Kathryn Oliver, Moira Faul *University of Bath*

Building on the substantial literature about the interactions which underpin policy processes, this panel brings together current theoretical, methodological and empirical work to investigate the relationship between networks, expertise and evidence in the political arena. We seek to provoke discussion on the following themes:

- the role of networks in the production, use, and/or discrediting of 'policy relevant' evidence
- 2. journeys of ideas within and across policy-knowledge communities
- 3. the relationships between policy and evidence/knowledge networks

We invite abstracts for presentations related to all aspects of studying networks, evidence, expertise and politics including (but not limited to)

- The relational structure of national and transnational knowledge regimes
- types of policy-knowledge actors (e.g. think-tanks)
- cases of political, evidence, and/or policy events
- policy and/or evidence networks
- the role of power elites in influencing evidence and expertise
- theoretical/methodological papers on the use and limitations of network methods in the study of the evidence-politics interface

Online Social Networks

Rense Corten
Utrecht University

This session focuses on the study of online social interaction from a social networks perspective. Examples of applications include, but are not limited to: social media networks, online social movements, sharing economy platforms, online markets, and the interaction between online and offline social networks.

Power, Influence and Network Structures

Alina Vladimirova

Institute of Oriental Studies of the Russian Academy of Sciences

This session is organized in collaboration with IPSA Research Committee on Political Power (IPSA RC36) to provide a room for a broad discussion on opportunities and challenges of network analysis methods for political power scholars. We encourage potential participants to introduce papers that link theory to practice, propose systematic testing of theoretical models with network data and demonstrate original network approaches to analysis of diverse forms of power in changing conditions of domestic and international politics. We aim to attract empirical papers that based on different theoretical backgrounds (network-as-structure, networks-as-actors) and concepts of power (power-as-control and power-as-access, networking power, network power, networked power and network-making power). We are especially interested in papers covering topics connected to conceptualization and measures of power in networks, to analysis of nodal positions and to different issues associated with creation of indexes.

Preferential attachment

Arnout van de Rijt Utrecht University

This session brings together research on cumulative advantage processes in network dynamics, also known as "preferential attachment". Papers can make a theoretical, statistical, or empirical contribution or any combination. Research may be concerned with such problems as empirically isolating cumulative advantage, finding conditions under which degree distributions follow power laws or Matthew Effects occur, specifying mechanisms that drive, shut off or mediate cumulative advantage, or identifying conditions under which initially popular nodes remain more popular than qualitatively superior other nodes.

Prison Inmates

David Schaefer *University of Missouri*

Incarceration represents a fairly extreme shock to one's social network, straining ties to those outside the prison walls, while creating the opportunity to forge new relationships within prison. A network perspective can illuminate how these worlds are structured, how prisoners respond to incarceration, and the role of others during community reentry.

We welcome a wide range of submissions focused on the networks of inmates, including former or future prisoners. Topics may include, but are not limited to: describing and explaining the structure of inmate networks, change in inmate networks over time, ties or communication between prisoners and those in the community, networks of released or soon-to-be-released inmates, and effects of prison networks on outcomes in prison and post-release.

Recent Advances in Statistical Analysis and Mathematical Modeling of Social Networks

Frederick Kin Hing Phoa

Institute of Statistical Science, Academia Sinica

In the current big-data regime, a large-scale social network, despite its sheer size and complexity, has received much attention from researchers of many different fields, including social sciences, network sciences, economists and statisticians. The grand aggregation of knowledge contributions from these fields generates many inspiring outcomes for this interdisciplinary research area. This organized session aims at introducing several recent advances in the statistical analysis and mathematical modeling of social networks. It gathers experts to discuss recent advances in sociology, information science and statistics, and to analyze the networks from different point of view. The topics include, but not limited to, network structure characterization, network data analysis, online data tracking, network dynamics, network modeling, and so on.

Recent Ethical Challenges in Social Network Analysis

Paola Tubaro, Antonio Casilli, Alessio D'Angelo, Guillaume Favre, Bernie Hogan, José Luis Molina, Elise Penalva-Icher, Louise Ryan *Centre National de la Recherche Scientifique (CNRS)*

Research on social networks is experiencing unprecedented growth, fueled by the consolidation of network science, new computational techniques, and the increasing availability of data from digital networking platforms. However, it raises formidable ethical issues that often fall outside existing regulations and guidelines, traditionally focused on informed consent and anonymization. New tools to collect, handle, and store personal and relational data expose both research participants and practitioners to risks. Political use and business capture of scientific results are becoming part of the researcher's experience. Legal and social ramifications of studies on personal ties and human networks surface.

This session aims to further advance ethical reflection in the face of these new challenges. We welcome contributions that critically engage with ethics in research on social networks, preferably based on one or more case studies. We are particularly interested in novel answers to new challenges, or reinterpretation of norms in ambiguous situations.

Relational approaches to social network analysis

John Boy, Justus Uitermark *University of Amsterdam*

This session invite submissions that showcase, and reflect on, the application of relational theorizing in social network analysis (SNA). Scholars like Norbert Elias and Pierre Bourdieu critiqued "substantialist" thinking in the social sciences and proposed relational approaches as an alternative. Unlike substantialism, which traces social phenomena back to specific variables or individuals, relational approaches conceive of the world as constituted through dynamic, unfolding relations. Social networks analysis seems a natural methodological complement, but on closer inspection, the fit between SNA and relational approaches is less smooth. Bourdieu considered social interactions, and by implication social networks, as merely epiphenomal and argued that sociologists need to uncover more fundamental structures. Mustafa Emirbayer's critique of substantialism - that it presumes that entities or individuals pre-exist interactions equally applies to much of SNA. Thus, a relational approach does not automatically justify SNA, but also forces us to reflect on its presuppositions and limitations. How can we incorporate notions of reflexivity into network analysis? How can we take into account cultural processes or political structures that are not easily captured by network metrics? Submissions may engage not only with Elias, Bourdieu or Emirbayer, but also a wide range of relational theorists including Dorothy Smith, Bruno Latour, Margaret Archer, and Ervin Goffman.

Relational Chains

Michel Grossetti
CNRS

In guides to analysing social networks, it is customary make a distinction between approaches by personal networks and approaches by complete networks. These two approaches have their advantages and their limits, but their common point is that they produce static representations of networks. There are other approaches, one of which can be called the relational chains method. There are famous examples like the survey by Milgram on "small worlds", Howell Lee on search for absortionnists and that by Granovetter on access to employment. In this method, it is not a matter of analysing static structures but rather of activating relations in processes of accessing resources. The objective of this session is to present works using this approach and to discuss the common points according to the social situations concerned: length of the chains; types of links; multiple chains; link activation conditions; etc.

Safety Nets of Individuals in Disadvantaged Positions

Basak Bilecen, Miranda J. Lubbers *University of Groningen and Harvard University*

In this neoliberal era of state retrenchment and privatization of risk, individuals and communities in disadvantaged positions, such as immigrants and people coping with poverty, are more marginalized. To cope with social risks and have 'better' life chances, they draw on formal and informal resources. At the formal level, they can extract or negotiate state infrastructures. In the case of migrants, they can do so in countries of origin, transit, and destination. At the informal level they can rely on support from their personal networks for useful resources such as economic support, information on jobs, housing, and education. But to what extent can personal networks offer social support to individuals in disadvantaged positions? How does informal support interact with formal support? How are gender, ethnicity, and class related to the networks and resource flows? This panel will discuss personal networks as safety nets for individuals and households in disadvantaged positions.

Sampling, Missing Data, and Inference in Ethnographic Networks

James Holland Jones, Ashley Hazel *Stanford University*

The study of interconnected relationships has a long, though frequently forgotten, history in anthropology. As the field of social network analysis has become more sophisticated, a growing mismatch has arisen between the underlying assumptions of statistical models for analyzing networks and the limitations of anthropological, field-collected network datasets that inform them. The realities of ethnographic fieldwork usually require collection of incomplete networks based on strategic sampling methods, resulting in partial networks with substantial missing data. Understanding regularities in missing data that arise both because of sampling designs and common field constraints offers great promise for understanding how statistical models are likely to fail and how we might improve their fit. This session will bring together papers on sampling, missing data, and inference for ethnographic network data in an attempt to address these persistent issues.

Scientific Networks

Valentina Kuskova, Vladimir Batagelj, Anuska Ferligoj NRU Higher School of Economics

The demand to measure the scientists` activity goes both from internal participants of the field and external stakeholders evaluating researchers` effectiveness. Recently, the studies of scientific collaboration networks were done in a variety of disciplines, such as social networks, sociology, economics, business administration, computer science, mathematics, and physics. These studies can be characterized by variety of initial data sources (different periodical and citation data bases) and techniques used, which were developed by bibliometriciants, information specialists, social network analysts and physicists. The main aim of the session is to represent the diversity of network approaches to study different kinds of scientific collaboration used in different fields, to compare them and to discuss the ways in which they could be combined.

Social Networks and Health Inequalities

Andreas Klaerner

Thuenen Institute for Rural Studie

Our session discusses social networks as drivers, modifiers and outcomes of health inequalities. Contributions may address functional and structural characteristics of whole social networks as well as personal networks.

The analytical unit of interest may include individuals, groups or organizations.

We are open to qualitative, quantitative, and theoretical contributions. Precedence will be given to novel and interdisciplinary theoretical or empirical work that combines perspectives from the social sciences

within the medical field.

We aspire to address these questions:

- Which are useful theoretical models that offer explanations for the link between social networks and health?
- Does the role of social networks for health change over the life-course?
- What is the position of non-kin networks, perhaps also compared to kin-networks?
- What do we know about social networks of groups with different social or socioeconomic status.
- How can current knowledge be translated into policy implications?

Social Capital - state of the art and new directions

Beate Völker University of Amsterdam

Although in many studies having 'contacts' or 'friends' is considered as having social capital, it is common knowledge that social networks are not always a resource. There are a number of theoretical notions how social resources/social capital - as resulting from social networks - can be understood, hypothesized and measured. Empirical studies applying measurements of social capital do not always follow the theoretical assumptions, but nevertheless, there is ample literature about social capital in various domains of people's life (mostly related to work, work organizations or neighborhoods). This session invites papers directed on this research programme of social capital: what have we achieved, so far? Have we been successful in establishing a body of knowledge about how people create social resources and about the returns on investment in relationships? Which hypotheses are falsified, which need better testing? Finally, can we ask new questions, what are new directions for studying people's social resources?

Social Influence

Christian Steglich, Tom Snijders *ICS Groningen & IAS Norrköping*

The empirical study of social influence using longitudinal network-and-behavior designs has been growing steadily with the availability of appropriate methods, software, and data. We now have the possibility to study quite nuanced mechanisms by which influence operates, in a diversity of research domains. For example, it is now possible to study influence based on structural equivalence (having the same network contacts) as an alternative mechanism to influence based on cohesion (direct ties). Also the question about who influences whom can be addressed. Social influence is conceptually not even limited to network-and-behavior studies. We can also investigate mechanisms of network-network influence, where one (one-mode) network defines what the reference group of social actors is that exerts influence, while another (one- or two-mode) network indicates what is being influenced. In this session we welcome methodological, theoretical, and applied contributions, as long as they are relevant for empirical research on social influence mechanisms.

Social Network Analysis in life science

Sebastian Sosa, Cédric Sueur, Mathieu Lihoreau, William Hoppitt Sun Yat-Sen University

Since the early 2000s, the use of social networking tools has developed considerably in research in life science, contributing to the study of relationships among individuals and species in many taxa from symbioses between plants and fungi, to vertebrates (fish, birds, mammals) and invertebrates (insects). Social network analysis (SNA) tools have also been used in a variety of research fields, including genetics, neurosciences, epidemiology, information transmission, ecology, ethology, sociobiology and nature conservation using techniques such as one or two-mode networks, Exponential Random Graph Models and Network Based Diffusion Analysis. These techniques have contributed to revolutionize specific research fields in life science. However, many techniques remain specific to particular disciplines. This symposium brings together researchers working on diverse biological systems and using different SNA tools, and offers opportunities for cross-disciplinary dialogue and forward-looking thinking.

Social Network Analysis of Mobile Phone Datasets

David Lazer, Kenth Engø-Monsen, Geoffrey Canright *Telenor Research*

Over the last decade we have witnessed a dramatic increase in available datasets coming from the mobile sector. Mobile phone data potentially offer insights into the communication dynamics of entire societies. We believe that it is of great value to the SNA community to gather people at Sunbelt interested in the analysis of mobile phone data, to discuss relevant research, work in progress, and recent results.

Social Networks and Climate Change

David Tindall, Mark Stoddart

Department of Sociology, University of British Columbia

This session will focus on networks and climate change, and will consider papers on theoretical, methodological, and substantive topics related to this theme, including organizational networks, virtual networks, discourse networks, and personal networks. Topics may include (but are not limited to) social movements, values and attitudes, community resilience, policy networks, climate change denial networks, political economic networks.

Social Networks and Political Participation

(social)media within the interplay between networks and participation.

Emilien Paulis, Nadine Meidert Université Libre de Bruxelles (ULB)

Political participation is a flourishing field of research in social sciences, generating many debates and complex explanatory models. The latter generally emphasized micro-/macro-level factors and dealt both with traditional/alternative forms of participation. They greatly contributed to our knowledge of who gets involved, why, and under which context. Yet, we know much less about the process of engagement/recruitment, i.e. the triggers of participation or the factors turning potential participators into politically active agents. Capitalizing on network theory and methodology, many social scientists have extensively integrated network explanations and analyses to account for the triggering of political behaviors undertaken by citizens, providing relational insights for a phenomenon that was deeply analyzed as individual undertaking despite its collective nature. The session welcomes theoretical/methodological/empirical contributions interested in the relationship between social networks and political participation of all kind. We also invite papers examining the role of

Social Networks and Sexual Risk

Lindsay Young, John Schneider *University of Chicago*

The topic of social networks has become the focus of considerable interest among researchers studying sexual risk behavior among a variety of populations including but not limited to men who have sex with men (MSM), people who inject drugs (PWID), sex workers, and adolescents. The network perspective has offered a way to move beyond individual-level analysis to consider the patterns of relationships in which individuals are embedded to better understand flows of influence, social support, and infectious disease transmission. In this session, we seek papers that explore the connection between sociometric or egocentric network structure and composition and sexual risks in at-risk populations. We aim to feature a wide range of network analytic techniques ranging from descriptive and exploratory methods to stochastic approaches like exponential random graph models (ERGMs) and actor-based models. We encourage the presentation of both cross-sectional and longitudinal data that is either single- or multi-level.

Social networks in the fields of public health and health promotion

Nicole Dukers-Muijrers, Mirjam Kretzschmar *University of Maastricht/Public Health Service South Limburg*

The value of social network research and of social network based interventions is gaining attention in the fields of public health and health promotion. Risky behaviour and diseases spread in social networks. So do preventive behaviours. This makes the web of social relationships between persons a vehicle for both dissemination and prevention of diseases. For example, peer-driven (or chain referral, or RDS based) interventions may be used to promote preventive behaviours in the network, especially among those who are otherwise hard-to-reach. Alongside the specific contacts, also the structural aspects of the social network may influence a persons health. Thereby, social networks are important in public health and should be used to render more effective public health care. In this session, presenters will explain how they can use aspects of the social networks to understand health and how such network information can be used to design interventions for improving public health.

Social Networks, Educational Settings, and Learning

Katerina Bohle Carbonell, Marc Sarazin, Martin Rehm Maastricht University
Jennifer Watling Neal
Michigan State University

This session focuses on papers that use social network analysis to understand how individuals involved in activities related to education and learning (pupils, students, teachers, school management, policy makers etc.) are affected by or use their social networks for educational purposes or in educational settings. The session's papers will build on the assumption that actors are embedded within social networks which provide opportunities and constraints, in turn affecting individuals' behaviours and attitudes. Within this framework, the session welcomes papers that seek to make empirical, methodological and/or theoretical contributions to understandings of social networks in learning and education. These could include papers on:

- The importance of social networks for the social and learning environments of students and educational professionals
- Theoretical processes underlying social networks, as well as the antecedents and consequences of networks
- Discussions of the particularities of educational settings from a social network perspective
- Social networks of educational policy-makers

Social psychology and social networks

Kayla de la Haye, Ruth Hunter University of Southern California

Social psychological processes are some of the key mechanisms that explain the interdependence of individuals and social networks. Many social network theories draw upon these social psychological processes to explain how network structures emerge based on individual psychological characteristics and affiliation preferences, which shape local tie configurations and ultimately broad structural features of social networks (e.g., structural balance theories). Social network theories also emphasize how social network characteristics, in turn, shape individual beliefs and behaviors, and group outcomes, through mechanisms that include social learning, normative influence, mimicry, social capital, and social comparison. This session presents new research that advances knowledge about how individual social psychological characteristics, such as social intelligence and social schema, influence network ties and tie dynamics, as well as studies that examine how networks influence individuals through implicit and explicit social psychological mechanisms.

Social Relationships Within and Between Ethnic Groups, and Their Consequences

Bonnie Erickson *University of Toronto*

In multi-ethnic societies, social relationships within and between ethnic groups play important roles in the social, political, and labour market fortunes of groups and their members. This session will include research on how ties to one's own group and/or to other groups affect key outcomes such as cultural assimilation, civic engagement, political views, attitudes towards ethnic groups, perception of discrimination towards minority groups, or success in labour markets.

Social support and health

Guy Harling

Institute for Global Health, University College London

One reason proposed for health being both a product of, and a determinant of, social network position and structure is the support and advice that flows through the network. This support is connected to, but distinct from, network position/structure itself. We invite abstracts that consider any aspect of social support and health on networks, focusing on what flows through ties as causal mechanisms for network or health status change in individuals. This might include how support is generated within networks, or how it is patterned across networks (e.g. by age, gender, social status). It might also include longitudinal analysis of how support or advice predicts health knowledge, behavior or outcome, or how health predicts receipt of support. Health topics might include infectious or non-communicable conditions. This session will focus primarily on quantitative analysis, potentially buttressed by qualitative material (i.e. mixed-methods). We would particularly welcome research from outside high-income settings.

Sport and Networks

Tom Toepfer, Raphael Heiberger *University of Bremen*

Sport is a phenomenon that touches almost all members of society and can be viewed from very different angles. So far, only little work has been conducted on sport using a social network perspective even though SNA might be used to explore many interaction processes of and within sport teams: Intragroup relations of team members, game situations (e.g. passes) as well as relations to opponents can give us fundamental insights in cooperation strategies of sport teams. Athletes as well as clubs are interconnected with their environment and have relations to other sport organizations, associations, sponsors, fans, governments or agents. SNA can be applied to analyze these relations or enlighten managerial recruitment strategies and supply networks of sport actors.

As sport research is an interdisciplinary area we like to address different disciplines that explore and analyze ego networks, whole networks, two-mode networks or social capital with an empirical or theoretical emphasis.

Teams for solving wicked problems and grand challenges

Ellen Fisher, Jeni Cross, Hannah Love Colorado State University

There is a growing effort to use teams to solve problems, especially wicked problems facing the world in the arena of science and technology. How do we know if our scientific teams are successful? Many scientists are using social network analysis (SNA) to understand how to research, study, coach, understand, and improve teams. This session will include presentations about how social network analysis can be used to understand: the performance of teams, team development, the formation and evolution of teams, and methods for analyzing team performance. Presentations on teams from other sectors with science or engineering components, including health, business, agriculture and public welfare are welcome.

The effect of women's workplace networks on their chances of obtaining positions of authority

Dragana Stojmenovska, Stephanie Steinmetz, Beate Volker *University of Amsterdam*

Women continue to be underrepresented in positions of organizational authority globally. Existing evidence shows that employee characteristics and macro factors far from account for the whole picture, suggesting that the most promising explanations may lie in the workplace itself. One potential explanation that has been understudied is women's networks at the workplace. Workplace networks can be beneficial for one's career, but also dysfunctional when they lead to exclusion from attractive positions. In this session, we invite both substantive and methodological contributions concerning the effect of women's workplace networks on their chances of obtaining positions of authority. What kind of networks facilitate women's inroads to authority positions? Is it the case that women have to be sponsored by men in their networks at work to obtain authority, as found in Burt's (1995) famous single case study? We welcome contributions from different paradigms and disciplines, including sociology, organizational science, and economics.

The SNA-Geo-Spatial-Temporal models

Elisa Bienenstock *Arizona State University*

Tie Content and Individual Outcomes in Organizations

Stefan Breet

Rotterdam School of Management, Erasmus University

In this session, we will zoom in on the content of ties and explore how individual outcomes and network characteristics differ based on the type of relationship that people have with each other. Researchers acknowledge the fact that prior work has mainly focused on network structure at the expense of content, and that it is important to further develop our understanding of the different types of dyadic phenomena and their consequences. We welcome papers that explore these phenomena in organizational settings and encourage a wide range of submissions. Possible examples include (but are not limited to): methodological approaches to measuring and analyzing tie content; the effects of network positions (e.g., network centrality, brokerage, density) for different types of social relationships; the opportunities and constraints of relationship heterogeneity and the way people utilize or overcome them; and the implications of tie content for individual innovation or performance.

Tie Dormancy and Reactivation

Chang Z. Lin, Alexandra Marin *University of Toronto - Department of Sociology*

Relationships change, and ties that were once significant sometimes fade or disappear. Having once existed, however, these ties retain the potential to re-emerge, mobilized like sleeper cells as circumstances or needs change. The potential of these ties can be enormous – when reactivated, previously dormant ties can offer benefits such as novel information and support. This session focuses on two key aspects in the changes in social relationships: becoming dormant and getting reactivated. The session organizers will consider submissions relevant to: 1) the processes by which ties become dormancy and reactivated; 2) measurement of dormancy; 3) costs and benefits of tie-reactivation. (This list is not exhaustive).

Urban Networks

Zachary Neal Michigan State University

As the majority of people now live in cities, cities are a key location for many social and economic activities, which can frequently be examined through a network lens. Urban networks exist at a range of scales, from neighborhood-level social networks among people, to city-level transportation networks, to global-level economic networks between cities. Additionally, urban networks are studied by network scientists from a range of disciplinary perspectives including geography, sociology, physics, and engineering. The study of "urban networks" has grown rapidly in the last decade and had led to both specialized conferences (e.g. www.urbannetworks.org) and journal special issues. This rapid growth in the size, scope, and scale of urban network research has left the area invigorated, but without a clear agenda for future work. This session will showcase an interdisciplinary range of substantive and methodological work on urban networks, with the aim of identifying future directions for this field.

Varieties of Qualitative Perspectives in Social Network Analysis

Stefan Bernhard, Andreas Herz, Inga Truschkat, Luisa Peters Institute for Employment Research

Qualitative approaches in Social Network Analysis (SNA) are a rapidly growing field of expertise. A variety of methodological traditions and theories inspire this research, including conversation analysis, ethnography, small story research, field theory, social world theory and interactionism. In empirical studies diverse qualitative methods are applied and different kinds of data are taken as qualitative data material including interviews, observations and visualizations. Fundamental to the qualitative approaches is a close entanglement of theory and method in the sense of a methodical holism. Their internal coherence is essential since theoretical assumptions orient methods and vice versa.

In this session we want to engage in a discussion on how different traditions and schools of thought orient qualitative research on social networks. We invite participants to present their empirical approaches and to discuss how they integrate theory, methodology and method in their research.

Words and Networks

Jana Diesner, *UIUC*, *USA*Peter Gloor, *MIT*, *USA*Johanne Saint-Charles, *Université du Québec à Montréal, Canada*Wouter van Atteveldt, *Vrije Universiteit Amsterdam, Netherlands*

This session is dedicated to innovative research at the nexus of text analysis (including discourse analysis, content analysis, text mining, and natural language processing) and network analysis. Work at the intersection of these fields lags behind in theoretical, empirical, and methodological foundations. Closing this gap matters since prior work has shown that considering the content of text data for certain types of network analysis, e.g. for studying communication networks and analyzing social media data, enables us to understand the impact of language use on social networks and vice versa. Research in these areas has led to eminent work, e.g., on language change, collaborative work, recommender systems, semantic networks, the semantic web, relation extraction, and the diffusion and adoption of information, rumors and beliefs offline and online, among other phenomena and application domains. We invite abstract submissions that contribute to the consolidation of text analysis and network analysis.