

## Day 1 (Monday): Domain Perspectives and Challenges

- Walk-In and Registration (9 - 10 a.m.)
- Welcome (10 a.m.)
- Overview of Workshop goals and overarching research perspective (Organizers)
- [Introduction round of participants \(1 slide per participant\)](#)
- **Invited Keynote 1 (Dark participation in online environments: How the Internet turned from hero to villain)**

**Thorsten Quandt**, Department of Communication, University of Münster, Germany

Abstract: Online communication was initially greeted by academia with much enthusiasm and hope. One core promise of this new age of societal communication was user participation – a revolutionary departure from then-dominant industrialized, mass-mediated, top-down communication. Many pundits thus hailed the internet as an irresistible tool for global democratization, promising a brighter future for humanity. Approximately two decades later, little remains of those hopeful visions. Instead, we are discussing growing polarization, hate speech, fake news, and disinformation. So how did this happen? In this presentation, I will outline the trajectory using historical analysis and empirical data. The evolution of online communication and its research serves as a cautionary tale, highlighting the dangers of one-sided perspectives on social influence. Both the initial optimistic view and the more recent doom-and-gloom bias prove not only misleading but also detrimental to public policy-making and society at large.

- **Invited Keynote 2 (Influence Diffusion Modeling and Influence Maximization: An Algorithmic Perspective)**

**Wei Chen**, Principal Researcher Microsoft Research Asia, Beijing, China

Abstract: In this talk, I will survey the algorithmic perspective in studying the influence propagation and the influence maximization task in social networks. I will first cover the basic influence diffusion models including the independent cascade model and the linear threshold model, and the classical influence maximization task, which is to select a small number of seed nodes in the social network to maximize the influence spread. Next, I will briefly introduce the algorithmic advances in the study of influence maximization and its various extensions, such as scalable influence maximization and competitive influence maximization. Finally, I will mention my recent research efforts in addressing filter bubble effect and fairness concerns in influence diffusion and influence maximization.

- **Invited Keynote 3 (Social Media from a Client perspective (Nexus Services at GroupM))**

**Karsten Kraume**, Chief Operating Officer, GroupM, Düsseldorf, Germany

Abstract: Social Media is an essential part of the media mix and faces strong growth. As leading media agency GroupM takes multiple perspectives on social. Exemplary questions of interest are listed below.

\* How are we discussed in social media as a company on platforms such as twitter?

\* How are we discussed in social media as employer on platforms such as Xing, LinkedIn?

\* How we can further innovate to support our clients along the social media value chain across all platforms such as Facebook, Instagram, TikTok, Pinterest, Snapchat, Twitter, Twitch, Reddit, XING, LinkedIn?

When looking at social media from a client perspective our service unit Nexus Services is key. Nexus Services offers expert know-how, campaign strategies, as well as tool-supported campaign activation in the programmatic channels: Search (Paid & Organic), Social, Programmatic and Retail Media. The supporting base is the Ad Operations team. Nexus Services work with all common DSPs, ad servers, platforms and tools on a customer-specific basis, as well as proprietary supporting tools for targeting, automation and quality assurance. We think social holistically. Our highly qualified and certified professionals are at our clients' disposal with extensive know-how to take paid social media campaigns to the next level. Our Paid Social Unit comprises over 80 talented colleagues covering all social media platforms. We offer complete support and effective advertising strategies on multiple platforms.

- Identification of sub-topics for following days, topic selection specifically for day 1
- Break-out sessions / discussion rounds / brainstorming
- Evening (starting 6 p.m.): Welcome Reception (Lorentz-Center)

## Day 2 (Tuesday): Towards a Research Agenda

- Opening of Day 2 and brief summary of previous day-1-sessions
- **Invited Keynote 4 (Social Influence Spread: A Fairness-aware Perspective)**

**Akrati Saxena**, LIACS, Leiden University, Netherlands

**Abstract:** The study of influence spread in social networks has garnered significant attention in recent years due to its profound impact on various domains, ranging from marketing and public health to politics and online communities. Several methods have been proposed in the literature to model social influence-spreading mechanisms and identify influential leaders. At the same time, in recent years, designing fairness-aware methods has received much attention in various domains, including machine learning, natural language processing, and information retrieval. A few famous examples are designing fair hiring systems, removing gender bias from word embedding, and creating a fair ranking for web search and advertisement systems. However, in social network analysis, understanding the impact of structural biases and inequalities of social systems on the fairness and accuracy of different methods (such as influence maximization, link prediction, and community detection methods) has received little attention.

In this talk, I will begin by talking about techniques for maximizing and minimizing social influence. Afterward, I will emphasize how the inherent bias in social networks can influence the fairness of these techniques. Following that, I will explain fairness constraints that can be considered while designing social influence methods. Then, I will briefly cover methods that aim to reduce the effects of structural biases in social influence maximization and minimization. Finally, I will conclude with open research directions and our thoughts on bridging the gap between fairness and Social Network Analysis.

- **Invited Keynote 5 (Influence Maximization in Social Networks and Related Submodular Problems)**

**Frank Neumann**, School of Computer Science, University of Adelaide, Australia

Abstract: Influence maximization is a classical optimization problem in social networks and can be stated in form of a submodular function. Submodular functions allow to model influence maximization and related problems and play a key role in the area of optimisation and machine learning as many real world problems face a diminishing return when adding additional components to a solution. In this talk, I will discuss the application of simple greedy algorithms and evolutionary computation techniques for these problems. The main goal of the talk is to summarize some recent techniques with the aim to allow applications of these algorithms in interdisciplinary areas.

- Identification of break-out sessions / discussion rounds for day 2
- Break-out sessions / discussion rounds

**Day 3 (Wednesday):** **Elaborating a Research Agenda**

- Opening of Day 3 and brief summary of previous day-2-sessions
- Possible Contributed Talks / Technical Talks (max. 2-3)
- Discussion and selection of Research Agenda topics
- Break-out sessions for selected topics / individual discussions & contributions
- Flextime
- Break-out sessions for paper topics / individual discussions & contributions
- Evening: Workshop Dinner (Katwijk, Beach)  
Bus departure: 6 p.m., leaves at Katwijk 9:30 p.m. for return

**Day 4 (Thursday):** **Funding opportunities and proposal preparation**

- Opening of Day 4 and brief summary of previous day-3-sessions
- Contributed Pitches on funding opportunities (max. 4-5 pitches, 10 minutes each)
- Discussion of funding ideas and formation of sub-groups
- Break-out sessions for proposal initiation groups
- Brief summary of discussed proposal ideas
- Break-out sessions for proposal initiation groups / proposal working groups

**Day 5 (Friday):** **Wrap-Up and Perspectives**

- Contributed Talks / Technical Talks (max. 1-2)
- Wrap-Up of research agenda and planning of result paper
- Wrap-Up of proposals and working groups
- Final summary by organisers; end of workshop ( $\approx$  2 p.m.)