Preface

The conference on advances in social network analysis and mining (ASONAM), ASONAM 2025 has marked the 17th anniversary of being the flagship, premier and leading venue in the rapidly growing domain of social network analysis and mining which emerged into one of the most well established and successful conferences. It is great pleasure to have the acceptance rate stabilizes below 20% for full papers since ASONAM was organized in Istanbul in 2012. Indeed, this reflects maturity and stability in terms of number of submissions, acceptance rate and participation, and ASONAM got its permanent position among top tier international conferences.

This year, we have Springer as the Sponsor and publisher of the proceedings. We will continue to have authors of all papers presented at ASONAM and the co-located events are invited to submit expanded versions of their manuscripts to the prestigious SNAM journal, NetMAHIB journal, or the LNSN series which are characterized by their high visibility and fast processing of submissions. Special thanks to Springer Nature for having their various publication venues which have been well integrated with ASONAM to the benefit of both parties.

We gathered over four days to witness interesting and exciting research achievements by various authors who present full, short, poster, or demo papers covering a wide spectrum of research contributions to the foundations and applications of social networks. These would not have been possible without the dedication of a large team of motivated research leaders work closely together for twelve months to put together the attractive and intensive scientific program. Their great achievements contribute much to the visibility of ASONAM. I would like to heartedly thank them all.

Not to forget in particular the generous support received from the operational organizing team who have spent considerable time and effort handling daily issues and activities, answering emails, updating the Websites, etc. Special thanks to Min-Yuh Day, Panagiotis Karampelas, Tansel Ozyer, Mehmet Kaya, Deniz Bestepe, Diaylo Steiman, and Jalal Kawash, who have worked hard to produce the proceedings, communicate with participants/authors, and handle the registration. Indeed, without their highly appreciated effort it would have been really very hard to maintain the quality of the social program and keep the trend of providing rich meals and breaks during the conference and the excursion trip organized.

Thank you to all organizers including general chairs, program chairs and the chairs of various tracks and workshops, to participants, to authors who submitted papers and to program committee members and the reviewers who invested their valuable time and effort to provide timely and comprehensive reviews. We encourage researchers and practitioners to submit again next year to get the opportunity and privilege to present their work at ASONAM 2026.

August 2025

Aijun An, York University, Canada Alfredo Cuzzocrea, University of Calabria, Italy Hongxin Hu, University at Buffalo, USA

Organization

Conference Committee

Steering Chair

Reda Alhajj University of Calgary, Canada

Honorary Chairs

Frans N. Stokman University of Groningen, Netherlands

General Chairs

Fakhri Karray Mohamed bin Zayed University of Artificial Intelligence, UAE

and University of Waterloo, Canada

Jon Rokne University of Calgary, Canada

Rokia Missaoui University of Quebec in Outaouais, Canada

Program Committee Chairs

Aijun An York University, Canada Alfredo Cuzzocrea University of Calabria, Italy Hongxin Hu University at Buffalo, USA

Industry Track Chairs

Faraz Rasheed Travelers Canada

Kwan Hui Lim Singapore University of Technology and Design, Singapore

Patricia Takako Endo Universidade de Pernambuco, Brazil

Workshops Chairs

I-Hsien Ting National University of Kaohsiung, Taiwan Michael Benzinger Technical University Munich, Germany

Sucheta Soundarajan Syracuse University, USA

Multidisciplinary Track Chairs

Alex Thomo University of Victoria, Canada Carson K. Leung University of Manitoba, Canada Utrecht University, Netherlands

PhD Forum and Posters Track Chairs

Lulwah Alkulaib Kuwait University, Kuwait

Mohammad Moshirpour University of California, Irvine, USA

Omair Shafiq Carleton University, Canada

Demos and Exhibitions Chairs

Kashfia Sailunaz University of Calgary, Canada Tansel Ozyer Ankara Medipol University, Turkey

Tutorial Chairs

Ee-Peng Lim Singapore Management University, Singapore Nitin Agarwal University of Arkansas - Little Rock, USA

Osmar Zaiane University of Alberta, Canada

Publicity Chairs

Buket Kaya Firat University, Turkey
Kashfia Sailunaz University of Calgary, Canada
Shang Gao Jilin University, China

Publication Chairs

Min-Yuh Day National Taipei University, Taiwan Panagiotis Karampelas Hellenic Airforce Academy, Greece

Registration Chairs

Jalal Kawash University of Calgary, Canada Mehmet Kaya Firat University, Turkey

Local Arrangements Chair

Naser Ezzati-Jivan Brock University, Canada

Web Chair

Deniz Bestepe Istanbul Medipol University, Turkey

Program Committee

Research Track Committee

Adetokunbo Makanju New York Institute of Technology, USA

Alex Thomo University of Victoria, Canada

Anna Sapienza Technical University of Denmark, Denmark

Barbara Carminati university of insubria, Austria

Bin Guo Trent University,

Carlos Rubio Medrano Texas A&M University - Corpus Christi, USA

Carmela Comito ICAR-CNR, Italy Chiara Boldrini CNR-IIT, Italy

Christine Largeron
David Skillicorn
De-Nian Yang
Universite de Lyon, France
Queens University, Canada
Academia Sinica, Taiwan

Dimitris Spiliotopoulos University of the Peloponnese, Greece

Ehsan Ul Haq The Hong Kong University of Science and Technology,

Hong Kong

Etienne Tajeuna Université du Québec en Outaouais (UQO), Canada

Giulio Rossetti KDD Lab ISTI-CNR, Canada

Giuseppe Manco ICAR-CNR, Italy

Hamed Alhoori Northern Illinois University, USA

Hao Gao Samsung, USA

Hasan Davulcu Arizona State University, USA Hemant Purohit George Mason University, USA

Jin-Hee Cho Virginia Tech, USA

Juergen Pfeffer Technical University of Munich, Germany

K. Selcuk CandanKaterina PotikaKeyan GuoArizona State University, USASan Jose State University, USAUniversity at Buffalo, USA

Lara Quijano-Sanchez Universidad Autónoma de Madrid, Spain

Ling JiangYork University, CanadaLong ChengClemson University, USALu-An TangNEC Labs America, USA

Mainack Mondal Indian Institute of Technology, Kharagpur, USA

Manos Papagelis York University, Canada

Marco Viviani Università degli Studi di Milano-Bicocca, Italy

Matteo Zignani Università degli Studi di Milano, Italy

Matthieu Latapy CNRS, France Md Amran Hossen Bhuiyan ETS,

Mehdi Kargar Toronto Metropolitan University, Canada

Mehmet Kaya Firat University, Turkey
Mengfei Yang Meta Platforms Inc,
Mirko Marras University of Cagliari, Italy

Moudoud Hajar universite du quebec en outaouais, Canada

Nishant Vishwamitra The University of Texas at San Antonio, USA Pasquale De Meo Vrije Universiteit Amsterdam, Netherlands

Reza Rejaie University of Oregon, USA

Reza Farahbakhsh Institut Mines-Télécom, Télécom SudParis, France

Rezvaneh Rezapour Drexel University, USA

Ridwanul Hasan Tanvir Pennsylvania State University, USA

Roshni Iyer UCLA, USA

Sabirat Rubya Marquette University, Sabrina Gaito University of Milan, Italy

Shirin Nilizadeh University of Texas at Arlington, USA Shivakant Mishra University of Colorado Boulder, USA

Sho Tsugawa University of Tsukuba, Japan

Shradha Sehgal Netflix, USA

Shuang Hao The University of Texas at Dallas, USA

Song Liao Texas Tech University, USA

Surendrabikram Thapa Virginia Tech, USA

Tao Ruan University of Colorado Boulder, USA

Ugochukwu Onyepunuka Amazon, USA

Usman Naseem University of Sydney, Australia William Andreopoulos San Jose State University, USA

Xingwei Yang TMU, USA

Xingzhi Guo Stony Brook University, USA Yini Zhang University at Buffalo, USA Zhiang Wu Nanjing Audit University,

Multidisciplinary Track Committee

Jawad Chowdhury Oak Ridge National Laboratory, USA

Mohamed Bouguessa Université du Québec à Montréal - UQAM, Canada

Shradha Sehgal Netflix, USA

Charalampos Chelmis University at Albany State University of New York, USA Chu-Yun Cheng National Taiwan University of Science and Technology,

Taiwan

Ujun Jeong Arizona State University, USA Fabiola Pereira University of São Paulo, Brazil Tamer Abuhmed Sungkyunkwan University,

Tanvi Banerjee University of Missouri Columbia, USA Mohammed Abuhamad Loyola University Chicago, USA

Rezaur Rashid University of North Carolina at Charlotte, USA

Venkatesh Srinivasan
Behnaz Moradijamei
Behnaz Moradijamei
Manuel Sandoval Madrigal
Mehmet Aktas
Farhan Tanvir
Muhammad Abulaish
Santa Clara University, USA
James Madison University, USA
Kennesaw State University, USA
Georgia State University, USA
South Asian University, India

Fan Jiang University of Northern British Columbia, Canada

Baha Rababah RRC Polytech, Canada

Hoang Hai Nguyen Canadian Food Inspection Agency, Canada

Industry Track Committee

Shradha Sehgal Netflix, USA

Wenchuan Mu Singapore University of Technology and Design, Singapore

Junhua Liu Forth AI, USA

Soumajyoti Sarkar AWS, Santa Clara, USA Sajal Halder CSIRO, Australia

Menglin Li Singapore University of Technology and Design, Singapore

Additional Reviewers

B. Aditya Prakash, Georgia Tech, USA Dong Wang, University of Illinois Urbana-Champaign, USA

Tim Weninger, University of Notre Dame, USA

Abdessamad Benlahbib, FSDM

Abdessamad Imine, Loria

Abiola Akinnubi, COSMOS-UALR

Adnan Hoq, University of Notre Dame

Aisling Third, The Open University Akira Matsui, Yokohama National

University
Alessandro Visintin, University of

Padua Visintin, University of

Alexander Rodriguez, Georgia Institute of Technology

Amrit Poudel, University of Notre Dame

Anastasios Giovanidis, Centre National de la Recherche Scientifique (CNRS)

Anatoliy Gruzd, Toronto Metropolitan University

Anggy Eka Pratiwi, Indian Institute of Technology Jodhpur

Ankan Mullick, IIT Kharagpur

Anurag Singh, National Institute of Technology Delhi, India

Arlei Silva, Rice University

Ashwin Shreyas Mohan Rao, Information Sciences Institute -

University of Southern California

Bailu Jin, Cranfield

Bijaya Adhikari, University of Iowa

Billy Spann, University of Arkansas at

Little Rock

Bing He, Georgia Institute of

Technology

Bohan Jiang, Arizona State University

Casey Doyle, Sandia National

Laboratories

Charalampos Chelmis, University at Albany State University of New York Christine Largeron, Université de Lyon Constantine Dovrolis, Georgia Institute of Technology

Courtland Vandam, Massachusetts Institute of Technology

David Skillicorn, Queen's University

Debanjan Datta, Virginia Tech

Eduard Dragut, Temple University

Ehsan Ul Haq, The Hong Kong University of Science and Technology

Etienne Gael Tajeuna, Laval University Fattane Zarrinkalam, University of

Guelph Fernando Terroso-Saenz, Catholic

University of Murcia Frank Liu, Southern Illinois University

Fujio Toriumi, The University of Tokyo George Panagopoulos, Ecole Polytechnique

Gita Sukthankar, University of Central Florida

Hadassa Daltrophe, Shamoon College of Engineering (SCE)

Hamid R. Rabiee, Sharif University of Technology

Hanjia Lyu, University of Rochester

Hasan Davulcu, Arizona State University

Hasan Davulcu, Arizona State University

Hitkul Jangra, Indraprastha Institute of Information Technology, Delhi

Huimin Zeng, University of Illinois at Urbana-Champaign

Huimin Zeng, University of Illinois at Urbana-Champaign

Humayun Kabir, Microsoft

Isabel Murdock, Carnegie Mellon University

Jiaming Cui, Georgia Institude of Technology

Jiamou Liu, The University of Auckland

Nishant

University

CEFET-RJ

Technology Jose Luis Fernandez-Marquez, University of Geneva Julio Cesar Soares dos Reis, Federal University of Viçosa Keith Burghardt, University of Southern California Kenji Yokotani, Tokushima University Keyan Guo, University at Buffalo Kijung Shin, Korea Advanced Institute of Science and Technology Kshiteesh Hegde, Western Digital Lanyu Shang, University of Illinois Urbana-Champaign Lara Quijano-Sanchez, Universidad Autónoma de Madrid Lu-An Tang, NEC Labs America Mainuddin Shaik, University Arkansas at little rock Mehrdad Jalali, Karlsruhe Institute of Technology Michael Smit, Dalhousie University Mirela Riveni, University of Groningen Muhammad Abulaish, South Asian University Nayoung Kim, Arizona State University Neha Gondal, Boston University Nicholas Botzer, University of Notre Nikhil Muralidhar, Stevens Institute of Technology Niloofar Yousefi, University Arkansas at Little Rock

Vishwamitra,

Nur Dean, Farmingdale State College

Institute of Information Technology

Raed Alharbi, University of Florida Rafael Elias De Lima Escalfoni.

Rajesh Sharma, University of Tartu

Orchid Chetia Phukan, Indraprastha

Clemson

Jiten Sidhpura, Sardar Patel Institute of

Rajiv Ramnath, The Ohio State University Sajedul Talukder, University Alabama at Birmingham Sangeeta Lal, Keele University Sankita Patel, SVNIT Sharma Chakravarthy, The University of Texas at Arlington Shreya Ghosh, Pennsylvania State University Shubham Gupta, Indian Institute of Technology Jodhpur Siyi Guo, University of Southern California Sriram Pemmaraju, Department of Computer Science, The University of Iowa **VIRGINIA** Subhodip Biswas, POLYTECHNIC INSTITUTE Suman Kundu, Indian Institute of Technology Jodhpur Tanvir Amin, Google Theresa Migler, California Polytechnic State University, San Luis Obispo Tobias Hecking, German Aerospace Center Toshiharu Sugawara, Waseda University Trenton Ford, University of Notre Dame Tuan Le, New Mexico State University Ulrik Brandes, ETH Zürich Wael Khreich, American University of Wang-Chien Lee, The Pennsylvania State University William Power, Temple University Xinwei Deng, Department of Statistics, Virginia Tech Xinyang Zhang, University of Illinois at Urbana-Champaign Xueying Liu, Virginia Polytechnic Institute and State University Yang Zhang, University of Illinois at Urbana-Champaign

Yifan Ding, University of Notre Dame Ying Zhao, Naval Postgraduate School Yiqiao Jin, Georgia Institute of Technology

Yoshiharu Ichikawa, Keio University/NHK

Young-Woo Kwon, Kyungpook National University

Yue Zhang, Amazon, Inc.

Yueqing Liang, Illinois Institute of Technology

Zhenming Liu, College of William and Mary

Zhenrui Yue, University of Illinois Urbana-Champaign

Zhihao Hu, Department of Statistics, Virginia Tech

Abdessamad Benlahbib, FSDM

Anastasios Giovanidis, Centre National de la Recherche Scientifique (CNRS)

Bailu Jin, Cranfield

David Skillicorn, Queen's University Etienne Gael Tajeuna, Laval University Fattane Zarrinkalam, University of Guelph

Huimin Zeng, University of Illinois at Urbana-Champaign

Neha Gondal, Boston University

Subhodip Biswas, Virginia Polytech Institute

Social Networks Analysis and Mining: 17th International Conference, ASONAM 2025, Niagara Falls, Ontario, Canada, August 25-28, 2025, Proceedings, Part I

LNCS V1, ASONAM 2025, Part I

Table of Contents

Research

Multi-State Survival Framework for Modeling Sentiment Shifts in Social Media1 Etienne Tajeuna
COS-META: Enhancing Few-shot Node Classification with Contrastive Meta- Learning
Contrastive Cascade Graph Learning for Classifying Real and Synthetic Information Diffusion Patterns
A Fair Label Propagation Community Detection Algorithm
Generalizing Hypergraph Ego-Networks and their Temporal Stability49 Francesco Cauteruccio, Salvatore Citraro, Andrea Failla and Giulio Rossetti
ELRUHNA: Elimination Rule-based Hypergraph Alignment
Dynamic and Overlapping Community Detection in Link Streams through Formal Concept Analysis

Martin Waffo Kemgne, Christophe Demko, Jean-Loup Guillaume and Karell Bertet
Boosting Attributed Network Embeddings with Clustering
Developing a Commenter Behavior-based Framework for Characterizing YouTube Channels
Shadi Shajari and Nitin Agarwal
Evaluating Structural Attractors and Retainers in YouTube Recommendation Networks
Md. Monoarul Islam Bhuiyan and Nitin Agarwal
AdaptiSent: Context-Aware Adaptive Attention for Multimodal Aspect-Based Sentiment Analysis
S M Rafiuddin, Sadia Kamal, Mohammed Rakib, Arunkumar Bagavathi and Atriya Sen
Efficient Influence Maximization in Signed Networks with Positive Influence Increasing and Negative Influence Decreasing Simultaneously via Edge-view Influence Estimation
Fu-Kai Chang, Shiou-Chi Li and Jen-Wei Huang
Simulating hashtag dynamics with networked groups of generative agents
Modeling Cross-Platform Narrative Diffusion: A Multiplex Approach to Information Spread in Social Media Ecosystems
A Network-Based Covariate Augmented Factorization Approach for Modeling Facebook Common Knowledge Experiments
Contagious rhythms: A wave-based epidemic approach for music virality on social platforms
Gabriel P. Oliveira, Luca Vassio, Ana Paula Couto Da Silva and Mirella M. Moro
Graph-Based Approaches to Utilizing LLMs for Generation of Individualized Student
Learning Segments

Temporal Motifs for Financial Networks: A Study on Mercari, JPMC, and Venmo Platforms
Say the Task, Build the Team: Prompt-Based Team Formation
Identification of Authoritative Nodes and Dismantling of Illicit Networks Using a Novel Metric for Measuring Strength of a Graph
GraphRAG-based NLP at Risk: Graphemic Dot Level Adversarial Attack on Arabic Sentiment and LLM Retrieval Augmented Models
LLM-Based Community Surveys for Operational Decision Making in Interconnected Utility Infrastructures
Can LLMs Reliably Label YouTube Videos? A Committee-Based Evaluation261 Adriano Mourthe, Carlos Eduardo Mello and Alípio Jorge
Multiview Commonsense Reasoning using LLMs for Understanding Crime Drama Series
Beliefs in Motion: Simulating Opinion Dynamics via LLM-Powered Community Reactions
From Non-overlapping to Overlapping Communities
Temporal Motif Participation Profiles for Analyzing Node Similarity in Temporal Networks
Decentralized and Self-adaptive Core Maintenance on Temporal Graphs329 Davide Rucci, Emanuele Carlini, Patrizio Dazzi, Hanna Kavalionak and Matteo Mordacchini

Empathy between Neighboring Nations: Distance Matters
Enhancing Regional Airbnb Trend Forecasting Using LLM-Based Embeddings of Accessibility and Human Mobility
COGRAM: A Computational Pipeline for Genome Assembly and Reconstruction via Optimized K-mer Sampling and De Bruijn Graph Networks373 William Coggins and Vijayalakshmi Ramasamy
Discovering Linkages Among Multiple Disease Networks by Joint Clustering381 Nouf Albarakati, Hussain Otudi, Rafaa Aljurbua and Zoran Obradovic
GraphDPR: A Privacy Policy Analysis Framework Using Knowledge Graphs and Topic Modeling

Social Networks Analysis and Mining: 17th International Conference, ASONAM 2025, Niagara Falls, Ontario, Canada, August 25-28, 2025, Proceedings, Part II

LNCS V2, ASONAM 2025, Part II

Table of Contents

Research

Protecting Vulnerable Voices: Synthetic Dataset Generation for Self-Disclosure
Detection
Shalini Jangra, Suparna De, Nishanth Sastry and Saeed Fadaei
BotArtist: Generic approach for bot detection in Twitter via semi-automatic machine
learning pipeline
Alexander Shevtsov, Despoina Antonakaki, Ioannis Lamprou, Polyvios Pratikakis and Sotiris Ioannidis
Identifying Social Interaction Outliers with the Use of Network Analysis: Disk
Decoration in the Middle Magdalenian Period
Sakhawat Hossan, Jing Deng, Rebecca Schwendler and Charles P. Egeland
Can We Predict Your Next Move Without Breaking Your Privacy?32 Arpita Soni, Sahil Tripathi, Gautam Siddharth Kashyap, Manaswi Kulahara, Mohammad Anas Azeez, Zohaib Hasan Siddiqui, Nipun Joshi and Jiechao Gao
BGM-HAN: A Hierarchical Attention Network for Accurate and Fair Decision Assessment on Semi-Structured Profiles
Junhua Liu, Roy Ka-Wei Lee and Kwan Hui Lim
Why I Took the Blackpill: A Thematic Analysis of the Radicalization Process in Incel
Communities
Jennifer Golbeck, Celia Chen and Alex Leitch

Who Leads in the Shadows? ERGM and Centrality Analysis of Congressional Democrats on Bluesky
Old Roots, Fresh Fruits: Clickbait Detection with Effective Model Design Choices on Social Media
Politicization During the 2024 United States Presidential Elections
Sentiment-Driven Differential Engagement: Hyperpartisan vs. Non-Hyperpartisan Users on X
Analysis of Cross-Platform Narrative Dissemination Through Contextual Focal Structures
Mitigating Bias for Unseen Demographic Groups in Graph Neural Networks121 Francisco Santos, Pang-Ning Tan and Abdol-Hossein Esfahanian
Understanding Fairness-Accuracy Trade-offs in Machine Learning Models: Does Promoting Fairness Undermine Performance?
A Multi-Agent Reinforcement Learning-Based Framework for Forecasting Terrorist Collaboration and Predicting Future Alliances
MultiScale Spectral GNN for Fraud Detection
Reducing Misclassification Risk in Dynamic Graph Neural Networks through Abstention
Federated k-Core Decomposition: A Secure Distributed Approach
LineDi2Vec: An Edge-Based Graph Embedding on Signed Social Networks196 Chen Xing and Masoud Makrehchi

Clustering Dynamic Graphs using Time and Text Content
GPSocio: A Transformer-based General-purpose Social Network Representation System
Xinyi Liu, Dachun Sun and Tarek Abdelzaher
Disinformation Contagion: Integrating Data-Driven Insights with Theoretical Model
Nitin Agarwal
From Inclusion to Contention: Analyzing DEI and "Woke" Narratives on Reddit246 Marcelo Sartori Locatelli, Arthur da Costa, Victor Thome, Marisa Vasconcelos and Virgilio Almeida
CommTox: Contextually-Aware Community Perceived Toxicity Classification261 Rhett Hanscom, Ayan Chowdhury, Shivakant Mishra, Qin Lv and Tamara Silbergleit Lehman
A Consent-Driven Model for Reducing Echo Chambers in Social Media270 Naomi Korem, Tammar Shrot and Hadassa Daltrophe
Modeling Toxicity Propagation in Social Networks with Weighted Focal Structure Analysis and Monte Carlo Epidemic Models
Dominance or Fair Play in Social Networks? A Model of Influencer Popularity Dynamics
Franco Galante, Chiara Ravazzi, Luca Vassio, Michele Garetto and Emilio Leonardi
Justice for the Disadvantaged: A Study of Public Reactions on Indian Supreme Court Judgments
In Bad Faith: Assessing Discussion Quality on Social Media
Fair2Vec: Learning Fair and Topic-Aware Representations for Influencer Recommendation

Duplicating Deceit: Inauthentic Behavior Among Indian Misinformation Duplicators on X/Twitter	
Ashfaq Ali Shafin and Bogdan Carbunar	
Weak Links in LinkedIn: Enhancing Fake Profile Detection in the Age of LLMs34 Apoorva Gulati, Rajesh Kumar, Vinti Agarwal and Aditya Sharma	.7
Handling Publication Imbalance for Effective Community Detection in Scholarly Networks	7
Md Asaduzzaman Noor, John Sheppard and Jason Clark	

Social Networks Analysis and Mining: 17th International Conference, ASONAM 2025, Niagara Falls, Ontario, Canada, August 25-28, 2025, Proceedings, Part III

LNCS V3, ASONAM 2025, Part III

Table of Contents

Multidisciplinary

GraphRAG-V: Fast Multi-Hop Retrieval via Text-Chunk Communities	1
PATHS: Agent-Based Modeling of Homelessness Pathways	13
Public Sentiment Analysis Toward the Department of Education: A Social Media Study Using Topic Modeling and Sentiment Analysis	28
Detection of Suicidal Risk on Social Media: A Hybrid Model	36
Fediverse Sharing: Cross-Platform Interaction Dynamics between Threads and Mastodon Users	46
Fact-Checking with Large Language Models via Cost-Effective First-Order Logic Reformulation	61
The Persuasive Power of Visual Elements in Strategic Communication	75

How Do Competing Narratives Spread? A Stance-Based Epidemiological Approach
90 Mayor Inna Gurung and Nitin Agarwal
Exploring Gender Differences in Chronic Pain Discussions on Reddit
Can Honest Headlines Engage? Correcting Misleading Headlines to Improve Credibility, Comprehension, and Engagement
Enhancing Large Language Models for Arabic Dialects Using Knowledge-Based Rethinking and Contrastive Learning
Analysis of User Temperament and Personality Traits in Social Media through Complex Networks
Industrial
A Scalable Approach to Marketing Funnel Modeling: Cross-Industry Insights from LinkedIn
TrendScope: A Temporal Hypergraph Framework for Food Trend Discovery146 Lulwah Alkulaib
Discovering Root Causes of Risks Using Counterfactual Knowledge Graphs (CKG)
Enumeration of Subgraph of Interest based on pruning
TrackGAE: Tracking Dynamic Community Evolution with Graph Autoencoders184 Maroun Haddad and Mohamed Bouguessa
Social Engineering and Information System Security- A survey on the Necessity of Prevention
Data-Driven Social Signal Mining for Stock Return Modeling via LinkedIn Networks

Behnaz Moradijamei, Nick Yennerell, Benjamin Scott, Luke Rogers and Aaron March

T	1 '	$\overline{}$

LLM-MAD: Multi-Agent LLM Reasoning for Multi-Modal Shilling Attack Detection in Online Platforms
Dina Nawara and Rasha Kashef
Prompt-Augmented LLMs with RAG for Addressing Cold-Start and Sparsity in Online Recommender Systems
TempHypE: Time-Aware Hyperbolic Neural Ordinary Differential Equation (ODEs) Knowledge Graph Embeddings For Dynamic Link Prediction
Empowering Recommender Systems with Agentic AI: Towards Adaptive Online Personalization
Ahmed Aly, Ahmed Ibrahim and Rasha Kashef
Benchmarking GNN and Graph Transformer Models for Dynamic Link Prediction 281 Nahid Abdolrahmanpour Holagh
Session-Based Recommender Systems Enhanced with Anomaly Detection: A Comparative Study
A multi-class centrality for transportation networks with heterogeneous agents297 William Weber and Mahendra Piraveenan
From Overload to Insight: A Network Science Approach to Personalized Literature Review
Social Network Analysis on LiDAR Research Through Relationship of Institutions and Authors
FAB
Scoring the Impact of Unstructured Data Using Quantum Properties315 Ying Zhao and Charles Zhou

Set-Based Domain Analysis for Missing Value Imputation in GIS Data: A Clustering-
Driven Approach
Code Reviews on a Budget: Memory-Efficient Fine-Tuning with QLoRA and RAG for Big Code Applications
Integration of Multi-Source Data for Wastewater Network Management
A methodology for analyzing financial needs hierarchy from social discussions using LLM
Multimodal Disaster-related Tweet Classification with Parameter-Efficient Fine- Tuning of Large Language Models
Measuring Social Media Polarization Using Large Language Models and Heuristic Rules
Which acts model transitions between different happiness states?
Simulating User Watch-Time to Investigate Bias in YouTube Shorts Recommendations
Beyond Transformers: Leveraging Large Language Models and Encoder-Decoder Architectures for Emotion Detection in Low-Resource Language
FOSINT-SI
Vendor-Specific Vulnerability Analysis: A 26-Year Study of CVE Distribution Patterns
Strategic Steering of Large Language Models via Game-theoretic Action Space Optimization

Position Bias in LLMs for Critical Decision Support - A Case Study on Multiple Casualty Triage	481
Ulrika Wickenberg-Bolin, Katie Cohen, Helena Björnesjö and Agnes Tegen	
Automated Definition Generation for Online Jargon Analysis	494
Outsmarting Willful-thinking Opponents: Bayesian Belief Revision for Adversaria Reasoning in Large Language Models	511

Social Networks Analysis and Mining: 17th International Conference, ASONAM 2025, Niagara Falls, Ontario, Canada, August 25-28, 2025, Proceedings, Part IV

LNSN V1, ASONAM 2025, Part IV:

Table of Contents

FOSINT-SI

Targets of Terrorgram The Who, What, and Where of Threatening Communication o Terrorgram. Lukas Lundmark, Antonia Hamich Andersson, Lisa Kaati and Katie Cohen	
Cross-Subreddit Behavior as Open-Source Indicators of Coordinated Influence: A Case Study of r/Sino & r/China	1
When Words Become Warnings. Assessing Threatening Communication in Online Spaces	9
Lukas Lundmark, Lisa Kaati, James Silver and Amendra Shrestha	_
HIBIBI	
Modelling effects of social network topology on opinion dynamics during the COVID-19 pandemic	9

Exploring gender-specific symptoms in coronary heart disease diagnosis
Enhancing Explainability in Knowledge Graph Construction for Healthcare Services Using Large Language Models
Fuzzy Consensus Clustering for Deep Learning Tuning. Taking Breast Cancer for Medical Diagnosis as a case
Mislabeling Misinformation: Annotation Consistency Shapes Machine Learning for DIY Health Risks
On the Use of 3D Modeling, Reconstruction and Printing Techniques for the Development of an Ankle Bone Prosthesis
Therapist by Chance: Investigating ChatGPT's Emotional and Mental Health Support via Sentiment Analysis on Social Networks
De Novo Drug Design for Antipsychotics: A case study with Llama 3.2 1B125 Harshit and Mayank Bhasin
MSNDS
Using Large Language Model to Generate ESG Report for Healthcare Organizations in Taiwan
Shooting Stars: Predicting the NBA Gems of Tomorrow
Profit-Oriented High Utility Sequential Recommendation in Big Dataset with Map Reduce
Exploring the Evolution of Recommender Systems Through Social Network Analysis
Bahareh Rahmatikargar. Poova Moradian Zadeh and Ziad Kobti

Fine-Tuning and Prompt-Based Methods for Temporal Reasoning in Multilingual Financial Texts
Bor-Jen Chen, Wen-Hsin Hsiao, Hsin-Ting Lu and Min-Yuh Day
Speech Improvement by Multimodal Analysis
Kazunori Minetaki and I-Hsien Ting
Investigating Algorithmic Bias in YouTube Shorts
Nitin Agarwal, Mert Cakmak and Diwash Poudel
Flexible Adjustment of Feature Vector Correlations for Personalized
Recommendations
Tsuyoshi Yamashita and Kunitake Kaneko
HyperSCI
Detecting Patterns of Interaction in Temporal Hypergraphs via Edge Clustering246 Ryan DeWolfe and François Théberge
Evaluation of Genetic Algorithm and Decision Tree Optimizations for Anomaly
Detection IDS
Beyond Pairwise Links: Hypergraph Modeling for Scientific Trend Forecasting274 Nithyasree Kusakula, Navyamsh Gangavaram, Liz Torres, Russell Funk and Mehmet Aktas
SMS
Analyzing the Discourse around Russo-Ukrainian war in Germany: Understanding
Variances in Public Stances 289
Kyoungin Baik and Jisu Kim
LinguaMark: Do Multimodal Models Speak Fairly? A Benchmark-Based Evaluation
Ananya Raval, Aravind Narayanan, Vahid Reza Khazaie and Shaina Raza
EDCOC: Early Detection of Coordinated Online Community using Graph Neural Networks
Hodaka Matsuzaki, Isao Karube and Junichi Hirayama
Real-Time Personalized Content Adaptation through Matrix Factorization and
Context-Aware Federated Learning
Sai Puppala, Ismail Hossain, Md Jahangir Alam and Sajedul Talukder

Privacy Control in Social Networks: Integrating Behavioral Patterns and Content Sensitivity for Audience Recommendation
Deviance
Detecting Users Botness On Meetup.com
LLMs Against Digital Deviance: Scalable Hate Speech Detection in Low-Resource and Code-Mixed Social Media
Toward Empathetic AI: Neural-Symbolic LLMs for Emotionally Aligned Conversations
Ismail Hossain, Md Jahangir Alam, Sai Puppala and Sajedul Talukder
Advancing Hate Speech Detection with Transformers: Insights from the MetaHate 395 Santosh Chapagain, Shah Muhammad Hamdi and Soukaina Filali Boubrahimi
Demo
A Social Data-Driven System for Identifying Estate-related Events and Topics403 Wenchuan Mu, Menglin Li and Kwan Hui Lim
CityHood: An Explainable Travel Recommender System for Cities and Neighborhoods
Gustavo Santos, Myriam Delgado, Daniel Silver and Thiago Silva
Journal
Tracing the 2024 U.S. Election Debate on Telegram with LLMs and Graph Analysis
Giordano Paoletti, Carlos H.G. Ferreira, Luca Vassio, Leonardo Rocha and Jussara M. Almeida
Leveraging Social Network Analysis and Mobility Data for Modeling Epidemic Spread in Urban Tourist Destinations
Rocket-Crane Algorithm for the Feedback Arc Set Problem

C-HDNet: A Fast Hyperdimensional Computing Based Method for Causal Effect Estimation from Networked Observational Data
Exploring Emergent Topological Properties in Socio-Economic Networks through Learning
Chanuka Karavita, Zehua Lyu, Dharshana Kasthurirathna and Mahendra Piraveenan
Engagement as a Predictor: Regression Insights from Facebook Activity During the Sudanese Revolution
An LLM-Guided Framework for Link Prediction in Homogeneous Graphs421 Atul Kumar, Md Zamilur Rahman and Asish Mukhopadhyay
A High-Performance Evolutionary Multiobjective Community Detection Algorithm422
Guilherme Oliveira Santos, Lucas Salvado Veiria, Giulio Rossetti, Carlos Henrique Gomes Ferreira and Gladston Moreira
A Survey of Abusive Language Detection on Online Platforms: Policy Analysis and Neural Network Solutions

Proceedings of ASONAM 2025

Author Index

Abdelzaher, Tarek	I-284, II-216
Abdi, Bahia El	
Abulaish, Muhammad	
Acharyya, Rupam	I-203
Adda, Mehdi	
Agarwal, Nitin I-97, I-112, I-158, II-113, II-231, II-278, III	I-75, III-90, III-432, V-225
Agarwal, Vinti	
Akrami, Yasamin	III-452
Aktas, Mehmet	
Aktas, Melike Yildiz	II-152
Al-Khateeb, Samer	
Alam, Md JahangirIII-440, V-	328, V-343, V-369, V-380
Albarakati, Nouf	I-381
Albert, Craig	
Aleroud, Ahmed	I-241
Alhajj, Reda	
Alharbi, Abdulsalam	
Aljurbua, Rafaa	
Alkulaib, Lulwah	
Almeida, Jussara M	
Almeida, Virgilio	
Altun, Bahadir	
Aly, Ahmed	
Amariucai, George	
Amatapu, Rahul	
Amure, Ridwan	,
An, Jisun	
Andersson, Antonia Hamich	
Andrade, Ancita	
Antonakaki, Despoina	
Aradhya, Sumukh Naveen	
Arifuzzaman, Shaikh	
Asghari, Sara	
Ashraf, Imran	
Ashtekar, Neil	
Azade, Sumnan	
Azeez, Mohammad Anas	
Bader, David	
Bagavathi, Arunkumar	
Bagheri, Ebrahim	
Baik, Kyoungin	V-289

XXXIV

Banerjee, Tanvi	III-98
Barnhouse, Terry	
Beigi, Alimohammad	III-46
Benferhat, Salem	
Benmiloud, Ibtissam	V-95
Berges, Alexandra	V-85
Bergtold, Jason	I-251
Bernard, H. Russell	III-46
Bertet, Karell	I-79, I-299
Bhasin, Mayank	III-420, V-125
Bhattacharya, Sayantan	III-75
Bhuiyan, Md. Monoarul Islam	I-112
Bhullar, Amangel	III-252
Björnesjö, Helena	III-481, III-494
Borg, Axel Alness	III-494
Both, Gert-Jan	V-417
Boubrahimi, Soukaina Filali	V-395
Bouguessa, Mohamed	III-184
Brynielsson, Joel	III-466, III-511
Cakmak, Mert	III-432, V-225
Caragea, Doina	
Carbunar, Bogdan	II-339
Carlini, Emanuele	
Carlsson, Niklas	
Cauteruccio, Francesco	
Chakrabarti, Avik	
Chang, Fu-Kai	
Chapagain, Santosh	
Chatterjee, Arnab	
Chaturvedi, Ritu	
Chelmis, Charalampos	
Chen, Bor-Jen	
Chen, Celia	
Chinthalapudi, Srijith	
Chowdhury, Ayan	
Chowdhury, Himadri	
Chowdhury, Jawad	
Chu, Kuo-Chung	
Chu, Lingyang	
Citraro, Salvatore	
Clark, Jason	
Coggins, William	
Cohen, Katie	
Cohen, Mika	The state of the s
Conway, William Jordan	
Coskun, Mustafa	
Costa. Arthur da	II-246

Cotugno, Eric	II-316
Crowe, Chad	III-131
Cunningham, Emma	V-39
Dagtas, Selim	III-432
Daltrophe, Hadassa	II-270
Dalvi, Abhishek	V-418
Dam, Arpan	II-324
Datta, Soumyajit	II-301
Davis, Chadbourne	III-36
Day, Min-Yuh	V-195
Dazzi, Patrizio	I-329
De, Soumilya	II-301
De, Suparna	II-1
DeWolfe, Ryan	V-246
Degrace, Jonathan	III-193
Delgado, Myriam	V-409
Demko, Christophe	I-79, I-299
Deng, Jing	II-24
Deng, Xinwei	I-166
Desai, Neh	V-152
Deters, Ralph	V-39
Dividino, Renata	I-16
Djellali, Choukri	
Dogan, Vedat	
Dorai, Gokila	
Driscoll, Rory	
Du, Zhihui	
Egeland, Charles P.	
Elhussein, Mariam	
Ellis-Joyce, Justin	
Esfahanian, Abdol-Hossein	
Ezeife, Christie	
Fadaei, Saeed	
Failla, Andrea	
Falade, Tope Christopher	
Farahat, Zineb	
Ferdous, S M	
Ferreira, Carlos H.G.	
Ferreira, Carlos Henrique Gomes	
Fond, Timothy La	
Funk, Russell	
Galante, Franco	
Gangavaram, Navyamsh	
Gao, Jiechao	
Garakani, Hossein Gharaee	
Garetto, Michele	
Gaven, Javadratha	II-166

XXXVI

Gera, Ralucca	I-189
Gharaee, Ali	V-261
Ghosh, Kripabandhu	II-301
Ghosh, Saptarshi	II-301
Ghosh, Smita	V-110
Gnanasekaran, Rajesh Kumar	II-316
Golbeck, Jennifer	
Guillaume, Jean-Loup	I-79, I-299
Gulati, Apoorva	II-347
Guo, Bin	II-181
Guo, Dongping	III-390
Gurung, Mayor Inna	III-90
Haddad, Maroun	III-184
Halappanavar, Mahantesh	I-64
Hall, Margeret	III-131
Hamdi, Shah Muhammad	V-395
Hamilton, Kristin Buckstad	II-316
Hanscom, Rhett	II-261
Harshit	III-420, V-125
Hassan, Naeemul	III-106
He, Hao	
Hemery, Baptiste	III-170
Henson, Van	II-206
Hew, Gordon	
Hirayama, Junichi	
Holagh, Nahid Abdolrahmanpour	
Honavar, Vasant	
Hossain, IsmailIII-44	
Hossan, Sakhawat	
Hryhoruk, Connor C.J	
Hsiao, Wen-Hsin	
Huang, Jen-Wei	
Huang, Junxiang	
Huchet, Antoine	
Hur, Soojung	
Ibrahim, Ahmed	
Ibrahim, Cameron	
Iham, Akram	
Ioannidis, Sotiris	
Jameel, Shoaib	
James, Timothy	
Jangra, Abhishek	
Jangra, Shalini	
Jeanne, Fabrice	
Jeong, Ujun	
Jha, Abha	
Jhalani, Shiv	V-110

Jorge, Alípio	I-261
Joshi, Nipun	
Kaati, Lisa	V-1, V-19
Kamal, Sadia	I-127
Kamiran, Faisal	I-269
Kamrani, Farzad	III-466, III-511
Kaneko, Kunitake	V-240
Kansal, Kartikeya	I-233
Karavita, Chanuka.	
Karube, Isao	V-313
Kashef, Rasha	III-223, III-237, III-267
Kashyap, Gautam Siddharth	II-32
Kasprisin, Jonathan	
Kasthurirathna, Dharshana	V-419
Kattampallil, Neil	I-166
Kavalionak, Hanna	I-329
Kelly, Cameron	V-358
Kemgne, Martin Waffo	I-79, I-299
Khazaie, Vahid Reza	V-298
Khudabukhsh, Ashiqur	I-344
Khudabukhsh, Ashiqur R	II-301
Khyari, Hamza	III-330
Kim, Jisu	V-289
Kimura, Shunya	I-203
Klein, Emily	II-316
Kobti, Ziad	
Kohistani, Ahmadjamy	
Korem, Naomi	II-270
Korkmaz, Gizem	
Kuhlman, Chris	
Kulahara, Manaswi	
Kumar, Atul	
Kumar, Rajesh	
Kumi, Sandra	
Kusakula, Nithyasree	
Labus, Brian	
Lakshmanan, Laks V.S.	
Lamprou, Ioannis	
Lancaster, Vicki	
Lavebrink, Samuel	
Lazhar, Labiod	
Lee, Dongman	
Lee, Hongju	
Lee, Maxwell	
Lee, Roy Ka-Wei	
Lehman, Tamara Silbergleit	
Leitch, Alex	II-55. II-316

XXXVIII

Leonard, Ryan	
Leonardi, Emilio	
Leung, Carson K.	V-54
Li, Cheng-Te	II-71
Li, Hongmin	III-390
Li, Menglin	V-403
Li, Shiou-Chi	
Lim, Kwan Hui	II-40, II-129, V-403
Limér, Christoffer	
Lindström, Madeleine	
Liu, Huan	
Liu, Junhua	
Liu, Penghang	
Liu, Xinyi	
Liu, Xueying	
Locatelli, Marcelo Sartori	
Lomotey, Richard K	
Lu, Chang-Tien	
Lu, Hsin-Ting	
Lundmark, Lukas	
Luo, Xiaochen	-
Lv, Qin	
Lyu, Zehua	
Maeyama, Jared	
Makrehchi, Masoud	
Malkawi, Malek	
Mansha, Sameen	
Manwani, Naresh	
March, Aaron	
Mashhadi, Neda	
Masud, Jakir Hossain Bhuiyan	
Masuda, Naoki	
Mata, Gabino	
Matsuzaki, Hodaka	
McCulloh, Ian	
Meira, Wagner Jr.	
Melhem, Abdullah	
Mello, Carlos Eduardo	
Minetaki, Kazunori	
Minutoli, Marco	
Miranda, Matheus Prado	
Mishra, Shivakant	
Mitra, Bivas	
Moh, Melody	
Moh, Teng-Sheng	
Mohammadinodooshan, Alireza	
Molinari Andrea	V-62

Moradijamei, Behnaz	III-208
Mordacchini, Matteo	
Moreira, Gladston	
Morin, Maxence	
Moro, Mirella M.	
Morsalin, Istiak	
Morstatter, Fred	
Mourthe, Adriano	
Moutacalli, Mohamed Tarik	
Mu, Wenchuan	
Mukhopadhyay, Asish	
Mundugar, Ramakrishna	
Nadif, Mohamed	
Narayanan, Aravind	
Nathan, Eisha	
Nawara, Dina	
Ngote, Nabil	
Nik, Aila	
Noor, Md Asaduzzaman	
Nyholm, Hannah	
O'Sullivan, Barry	
Obradovic, Zoran	
Okeukwu-Ogbonnaya, Adaeze	
Oliveira, Gabriel P.	
Oshiro, Cj	V-110
Otudi, Hussain	
Pal, Himanshu	
Paoletti, Giordano	V-415
Park, Yongwan	
Park, Youngjun	
Patel, Rushil	V-110
Pathak, Sayan	II-324
Pathania, Nitika	V-416
Pawlowski, Estelle	III-170
Pelzer, Björn	III-494
Pena, Irma de la	III-28
Pereira, Fabíola	III-123
Pilaud, Manon	III-28, V-11, V-85
Piraveenan, Mahendra	III-297, V-419
Piscopo, Michael	I-189
Poudel, Diwash	III-75, V-225
Pratikakis, Polyvios	II-16
Prestwich, Steven	
Prince, Md. Sirajum Munir	I-16
Priniski, Hunter	I-143
Prokopenko, Mikhail	
Puppala, Sai	III-440, V-328, V-343, V-369, V-380

Rad, Radin Hamidi	I-218
Rafiuddin, S M	I-127
Rahman, Khandker Sadia	III-13
Rahman, Md Zamilur	V-421
Rahmatikargar, Bahareh	III-289, V-180
Rakib, Mohammed	
Ramasamy, Vijayalakshmi	I-373, I-389
Rashid, Rezaur	
Rathi, Chirag	V-152
Raval, Ananya	V-298
Ravazzi, Chiara	II-286
Raveendran, Jayasree	III-375
Ray, Madhurima	V-39
Raza, Shaina	V-298
Razzak, Imran	III-114
Ribeiro, Elaine	III-123
Rocha, Leonardo	V-415
Rogers, Luke	III-208
Rony, Md Main Uddin	III-106
Rossetti, Giulio	I-49, V-422
Rucci, Davide	I-329
Rudra, Koustav	II-301
Safro, Ilya	
Salaheddine, Mohamed	V-95
Sandri, Simone	
Santos, Francisco	
Santos, Guilherme Oliveira	
Santos, Gustavo	
Santos, Matheus	
Saritaş,, Melisa	
Sarıyüce, A. Erdem	
Sastry, Nishanth	
Schwendler, Rebecca	
Scott, Benjamin	
Sekerinski, Emil	
Sen, Arun	
Sen, Atriya	
Shafin, Ashfaq Ali	
Shajari, Shadi	
Sharma, Aditya	
Sharma, Charu	
Sharma, Shachi	
Shehmir, Sarama	
Shen, Ying-Xuan	
Sheppard, John	
Sherman, Casi	
Shevtsov, Alexander	II-16

	7.01
Shibao, Naoki	
Shrestha, Amendra	
Shrot, Tammar	
Siddiqui, Zohaib Hasan	
Silva, Ana Paula Couto Da	
Silva, Thiago	
Silver, Daniel	
Silver, James	
Singh, Paolo	
Soni, Arpita	
Srinivasan, Venkatesh	
Sriram, Harinarayan Asoori	
Steinle, Carolyn	I-143
Sterrn, Celia	II-316
Stevens, Logan C.	II-316
Suleiman, Basem	III-114
Sun, Dachun	I-284, II-216
Sèdes, Florence	III-193
Tahir, Anique	III-46
Tajeuna, Etienne	
Talukder, Sajedul III-440, V-328,	
Tan, Pang-Ning	
Tang, Susan Xu	
Tasnim, Nowshin	
Tegen, Agnes	
Terejanu, Gabriel	
Thome, Victor	
Thomo, Alex	
Thukral, Sachin	· ·
Théberge, François	
Tillman, Robert	
Ting, I-Hsien	
Torres, Liz.	
Toulina, Glykeria	
Tran, Anh	
Tran, Hien	
Tripathi, Sahil	
Tsaparas, Panayiotis	
Tseng, Yu-Min	
Tsugawa, Sho	
Tur, Dilek Hakkani	
Turaga, Srinivas C	
Umoh, Esther	
Vangeli, Marius	
Vasconcelos, Marisa	
Vassio, Luca	
Veiria, Lucas Salvado	V-422

Venkatesh, Tharun	V-110
Villamayor, Kelly	V-54
Wachtmeister, Erik	
Weber, William	III-297
Wickenberg-Bolin, Ulrika	III-481
Xiao, Xinli	III-390
Xing, Chen	II-196
Xu, Kevin S	I-314
Yamashita, Tsuyoshi	V-240
Yang, Zaihan	III-36
Yaros, Ronald	III-106
Yennerell, Nick	III-208
Yoo, Clay	I-344
Young, Joseph	I-189
Yu, Tengkai	III-1
Zadeh, Pooya Moradian	V-180
Zarrella, Rebecca	II-316
Zhang, Lingling	I-218
Zhao, Ying	III-158, III-315
Zhou, Charles	III-158, III-315
Zhou, Jesse	III-158
Zia, Muhammad Abdullah	I-269
Zihayat, Morteza	I-218
Zrira, Nabila	V-95