3rd (Inter-)National Conference on Infectious Disease Modeling 2025

February 26-28, 2025

GLS Event Campus, Berlin, Germany

>>> Programme <<<

3rd (Inter-)National Conference on Infectious Disease Modeling 2025

- Programme OVERVIEW -

Tuesday, 25 February 2025	Wednesday, 26 February 2025	Thursday, 27 February 2025	Friday, 28 February 2025
	Registration Desk open 08:30 – 17:30	Registration Desk open 08:00 – 15:30	Registration Desk open 08:00 – 11:00
Pre-Conference Workshop 10:00 – 16:00 "Modelling Diseases With The German Epidemic Microsimulation System" Organized by OptimAgent Venue: Education center "Veterinarium Progressum" Oertzenweg 19b, 14163 Berlin (Düppel)	Welcoming 10:00 – 10:45 // Aula	Mini-Symposium II 09:00 – 10:30 // Aula	Parallel Sessions 09:00 – 10:30 YOUNG MONID Panel Contributed Talks VII Contributed Talks VIII
	Coffee Break & Photos 10:45 – 11:15	Coffee Break 10:30 – 11:00	Coffee Break 10:30 – 11:00
	Keynote I Prof. Alessia Melegaro 11:15 – 12:15 // Aula	Keynote II Prof. John Edmunds 11:00 – 12:00 // Aula	Mini-Symposium III 11:00 – 12:30 // Aula
	Elevator Pitches 12:15 – 13:00 // Aula		
	Lunch Break 13:00 – 14:00 // Restaurant Oderberger	Lunch Break 12:00 – 13:00 // Restaurant Oderberger	Closing Ceremony 12:30 – 13:30 // Aula
	Parallel Sessions 14:00 – 15:30 Project Update I Contributed Talks I Contributed Talks II	Parallel Sessions 13:00 – 14:30 Project Update II Contributed Talks III Contributed Talks IV	
	Coffee Break 15:30 – 16:00 // Lounge	Coffee Break 14:30 – 15:00 // Lounge	
	Mini-Symposium I 16:00 – 17:30 // Aula	Parallel Sessions 15:00 – 16:30 Project Update III Contributed Talks V Contributed Talks VI	
	Postersession 17:30 – 19:00 // Lounge & R101	[Committee Meeting 17:00 – 19:00 (by invitation only)]	
	Get-Together 19:00 – 22:00 // Restaurant Oderberger		

Time	DAY 1: Wednesday - February 26, 2025	Room
08:30 - 09:55	*REGISTRATION*	Foyer in Haus 1
10:00 - 10:45	**WELCOMING** *Moderation: A. Kuhlmann, B. Lange & R. Mikolajczyk* Welcome from the • MONID Board • MinDirig'in Katharina Peter (BMBF) • RKI President Prof. Dr. Lars Schaade • Programme Committee (*Highlights*)	Aula
10:45 - 11:15	*COFFEE BREAK & PHOTOS*	Lounge
11:15 - 12:15	**KEYNOTE I – Prof. Alessia Melegaro** (Bocconi University, Italy) "From behavioral science to mathematical modelling: adding realism to infectious disease models" *Moderation: A. Kuhlmann*	Aula
12:15 - 13:00	**ELEVATOR PITCHES** *Moderation*	Aula
13:00 - 14:00	*LUNCH BREAK*	Restaurant Oderberger
	PARALLEL SESSIONS:	
14:00 - 15:30	**PROJEKT UPDATES I** *OptimAgent & PREPARED & RESPINOW*	Room 1
14:00 - 15:30	**CONTRIBUTED TALKS I - Modelling of interventions & decision-making** *Chair/Co-Chair*	Room 2
14:00 - 14:15	Cornelia Pokalyuk (University of Lübeck) "Inter-city infections and the role of size heterogeneity in containment strategies"	
14:15 - 14:30	Christoph Sticha (Fraunhofer Institute for Translational Medicine and Pharmacology ITMP, LMU University Hospital, Ludwig Maximilian University of Munich) "A General Deterministic Model of Ordinary Differential Equations for a Broad Variety of Different Diseases"	
14:30 - 14:45	Lilian Kojan (University of Lübeck) "A matter of priorities: A discrete choice experiment on public preferences for the management of respiratory epidemics" (OptimAgent)	
14:45 - 15:00	Sascha Korf (German Aerospace Center) "Agent-based modeling for realistic reproduction of human mobility and contact behavior to evaluate test and isolation strategies in epidemic infectious disease spread" (LOKI/PANDEMOS)	
15:00 - 15:15	Isti Rodiah (Helmholtz Centre for Infection Research) "Scenarios for RSV Dynamics in the 2024–2025 Season in Germany: Evaluating the Impact of Targeted Interventions with Adaptive Modeling and Population-Based Data – RESPINOW Study" (RESPINOW)	
15:15 - 15:30	Johannes Horn (Martin Luther University Halle-Wittenberg) "Constructing a realistic population to improve modelling precision for future pandemics" (OptimAgent)	

14:00 - 15:30	**CONTRIBUTED TALKS II - Technical implementation of models & applications** *Chair: tba/Co-Chair: tba*	Room 3
14:00 - 14:15	Jan Hasenauer (Rhenish Friedrich Wilhelm University of Bonn) "Integrative Modeling of the Spread of Serious Infectious Diseases and Corresponding Wastewater Dynamics" (INSIDe)	
14:15 - 14:30	Hugo Soubrier (Epicentre/MSF and Charité - Berlin University of Medicine) "Unravelling the chains of transmission of the 9th Ebola outbreak in DRC, 2018"	
14:30 - 14:45	Anna Wendler (German Aerospace Center) "An extension of age-of-infection models: A SECIR model based on integro-differential equations for epidemic outbreaks" (LOKI)	
14:45 - 15:00	Aleksandr Bryzgalov (Martin Luther University Halle-Wittenberg) "Effects of heterogeneity in the contact numbers on the spread of respiratory infections: weekends reduction of contacts" (OptimAgent)	
15:00 - 15:15	Joao-Marcelo Braza-Protazio (Federal University of Pará, Brazil and University of Leipzig) "FluModell: A Discrete SEIRS Model Applied to the Simulation of Seasonal Influenza: A Study Case applied to the German Health System" (PROGNOSIS)	
15:15 - 15:30	Marvin Schulte (Fraunhofer Institute for Industrial Mathematics ITWM, University of Kaiserslautern-Landau) "Inferring the effect of self-protective behavior on transmission dynamics" (SEMSAI)	
15:30 - 16:00	*COFFEE BREAK*	Lounge
16:00 - 17:30	**MINI-SYMPOSIUM I** **The importance of pathogen carriage and asymptomatic infections when modelling infectious disease dynamics and public health interventions** *Moderation: Frank Sandmann*	Aula
	Marc Jit (New York University, USA) "Why it matters to model pathogen carriage and asymptomatic infections accurately when inferring infectious disease dynamics and the impact of public health and social measures"	
	Alexander Kuhlmann (University of Lübeck) "Impact of the invasive pneumococcal disease (IPD) serotype carriage and distribution for modelling the implementation of effective and efficient pneumococcal vaccination strategies in Germany"	
	Felix Günther (Robert Koch Institute) "How modelling meningococcal serotype carriage and vaccination strategies for Germany has highlighted the potential for serotype replacement and the need for future data collections"	
	Stefan Flasche (London School of Hygiene and Tropical Medicine, UK and Charité – Berlin University of Medicine) "Asymptomatic infections; a key ingredient to pandemic response"	
17:30 - 19:00	**POSTERSESSION** *Accompanying sharing mode: senior + young scientist*	Lounge & R101 (H 1)
19:00 - 22:00	**Get-together**	Restaurant Oderberger

	DAY 2: Thursday - February 27, 2025	
09:00 - 10:30	**MINI-SYMPOSIUM II** **Inferring contact patterns to understand disease spread: integrating mobile phone data and surveys** *Moderation: Vitaly Belik*	Aula
	Chao Xu (Martin Luther University Halle-Wittenberg) „Contact Variation in Germany During COVID-19: The Role of Demographics, Self-risk Perception, Vaccination, and States"	
	Steven Schulz (NET CHECK GmbH, Berlin) „Euro 2024 in Germany: Using Mobile Phone Contact Data to Analyze the Impact of Mass Gatherings on Respiratory Infection Risk"	
	Huynhn Thi Phuong (University of Münster) „Social contacts: insights from contact surveys and mobile phone data"	
	Sebastian A. Müller (Technical University of Berlin) „Comparing GPS and cell-based mobile phone data to identify activity participation during the COVID-19 pandemic"	
10:30 - 11:00	*COFFEE BREAK*	Lounge
11:00 - 12:00	**KEYNOTE II – Prof. John Edmunds** (London School of Hygiene and Tropical Medicine, UK) "The use of mathematical modelling for decision-making in the UK" *Moderation: R. Mikolajczyk*	Aula
12:00 - 13:00	*LUNCH BREAK*	Restaurant Oderberger
	PARALLEL SESSIONS:	
13:00 – 14:30	**PROJEKT UPDATES II** *INSIDe & PROGNOSIS & LOKI*	Room 1
13:00 - 14:30	**CONTRIBUTED TALKS III - Methodological research & transmission dynamics** *Chair: tba/Co-Chair: tba*	Room 2
13:00 - 13:15	Matthias Müller-Hannemann (Martin Luther University Halle-Wittenberg) "Dynamic Traffic Assignment for Public Transport with Applications to Epidemic Spread Modelling" (OptimAgent)	
13:15 - 13:30	René Schmieding (German Aerospace Center) "Novel travel time aware metapopulation models and multi-layer waning immunity for late-phase epidemic and endemic scenarios" (LOKI/PANDEMOS)	
13:30 - 13:45	Cana Kussmaul (Max Planck Institute for Infection Biology) "Assessing the consequences of weather model misspecification in transmission models of infectious diseases"	
13:45 - 14:00	Julia Bicker (German Aerospace Center) "Hybrid metapopulation-agent-based epidemiological models for efficient insight on the individual scale: a contribution to green computing" (INSIDe)	
14:00 - 14:15	Hannah Derwanz (Martin Luther University Halle-Wittenberg) "Disparities in Intervention Stringency and Adherence during Epidemics" (OptimAgent)	

14:15 -14:30	Irene Garcia-Fogeda (University of Antwerp, BE) "Within-host mathematical models to study antibody kinetics after the prophylactic Ebola vaccine in the Democratic Republic of the Congo"	
13:00 - 14:30	**CONTRIBUTED TALKS IV - Human behaviour & social contact structures** *Chair: tba/Co-Chair: tba*	Room 3
13:00 - 13:15	Henrik Zunker (German Aerospace Center) "Risk-mediated self-regulation of contacts desynchronizes outbreaks in metapopulation epidemic models" (LOKI/PANDEMOS)	
13:15 - 13:30	Sydney Paltra (Technical University of Berlin) "Bimodal Contact Reductions and the Persistence of Social Homophily during the COVID-19 pandemic" (MODUS-COVID/infoXpand)	
13:30 - 13:45	Andreas Reitenbach (Karlsruhe Institute of Technology) "From Influence to Incidence: Comparing social influence models of protective behavior in epidemics" (infoXpand)	
13:45 - 14:00	Leonard Stellbrink (University of Lübeck) "How Social Influence Shapes Protective Behaviors: Results From a Cross-Sectional Survey" (infoXpand)	
14:00 - 14:15	Hendrik Nunner (University of Lübeck) "Selective Contact Reduction and its Role in Shaping Disease Dynamics in Social Networks" (infoXpand)	
14:15 -14:30	Silvan Wehrli (Robert Koch Institute) "How fringe are fringe communities? A case study on the COVID-19 vaccination discourse on Telegram, X/Twitter and online news in German"	
14:30 - 15:00	*COFFEE BREAK*	Lounge
	PARALLEL SESSIONS:	
15:00 - 16:30	**PROJEKT UPDATES III** *infoXpand & SEMSAI & MODUS-COVID & PANDEMOS*	Room 1
15:00 - 16:30	**CONTRIBUTED TALKS V - Modelling of interventions & decision-making** *Chair: tba/Co-Chair: tba*	Room 2
15:00 - 15:15	Marc Jit (New York University, USA) "The Lancet Commission for Strengthening the Use of Epidemiological Modelling of Emerging and Pandemic Infectious Diseases"	
15:15 - 15:30	Nicolas Franco (University of Namur, BE) "Living through COVID-19 without a vaccine: a retrospective analysis for Belgium"	
15:30 - 15:45	Johannes Ponge (University of Münster) "The Trigger-Strategy-Measure Approach: Formalizing non-pharmaceutical interventions in agent-based models" (OptimAgent)	
15:45 - 16:00	Noemi Castelletti (Ludwig Maximilian University of Munich) "A Reaction Toolbox for Pandemic Preparedness: Integrating Cohort Studies, Remote Sampling, and Predictive Modeling"	
16:00 - 16:15	Fabio Sartori (Karlsruhe Institute of Technology) "Social Heterogeneity in Disease Prevention: When Behavioral Polarization Helps and Harms" (infoXpand)	
16:15 - 16:30	Prerika Nehra (Martin Luther University Halle-Wittenberg) "Cost effectiveness of architectural interventions to mitigate the spread of nosocomial infections in emergency departments in Germany: A model-based economic analysis" (OptimAgent)	

15:00 - 16:30	**CONTRIBUTED TALKS VI - Data acquisition & parameter estimation** *Chair: tba/Co-Chair: tba*	Room 3
15:00 - 15:15	Maged Mortaga (University of Lübeck) "Rapid Data Collection via Social Media Polls for Public Health" (infoXpand)	
15:15 - 15:30	Thi Huyen Trang Nguyen (Hasselt University, BE) "Global Mobility Flows and COVID-19 Spread in Europe during the Emergency Phase: Insights from Facebook data"	
15:30 - 15:45	Karina Wallrafen-Sam (Rhenish Friedrich Wilhelm University of Bonn) "Mathematical Model-Based Insights into Hepatitis E Transmission in Germany" (INSIDe)	
15:45 - 16:00	Sarah Kramer (Max Planck Institute for Infection Biology) "Purely statistical methods of inferring causality between time series fail to accurately detect pathogen-pathogen interactions"	
16:00 - 16:15	Billy Quilty (Charité – Berlin University of Medicine) "A Bayesian framework for estimating SARS-CoV-2 serological protection thresholds: Natural and hybrid immunity through four COVID-19 waves in South Africa"	
16:15 - 16:30	Raquel Rubio Acero (Ludwig Maximilian University of Munich) "VDPV2, from wastewater surveillance to a seroprevalence study" (INSIDe)	
17:00 - 19:00	*[Internal Meeting: SAB & SG MEETING MONID Steering Committee & SAB]*	
	Posters are available for viewing & discussion (optional)	

	DAY 3: Friday - February 28, 2025	
	PARALLEL SESSIONS:	
09:00 - 10:30	**YOUNG MONID Panel** *Moderation: B. Musundi, M. Harries*	Room 1
	Martín Lotto Batista: tbd	
	Julian Heidecke: tbd	
09:00 - 10:30	**CONTRIBUTED TALKS VII - Modelling of interventions & decision-making (** *Chair: /Co-Chair*☺	Room 2
09:00 - 09:15	Markus Loeffler (University of Leipzig) "Intensive antigen based school testing during the COVID-pandemic saved about 1000 lives in Saxony – Results of a simulation study"	
09:15 - 09:30	Alina Peter (TWT GmbH Science & Innovation) „Pandemic Preparedness through Digital Twin Modeling of a Hospital"	
09:30 - 09:45	Florian M. Marx (Ruprecht Karl University of Heidelberg) "Modelling the population-level impact of novel tongue swab-based point-of-care nucleic acid amplification tests for tuberculosis in South Africa" (RESPINOW)	
09:45 - 10:00	Alejandra Rincon Hidalgo (NET CHECK GmbH, Berlin) "Dissecting Epidemic Factors via Bayesian Analysis of GPS Contacts" (OptimAgent)	

10:00 - 10:15	Beate Jahn (UMIT TIROL - Private University For Health Sciences and Health Technology, AT) "Health and Economic Impact of Delayed Access to Cancer Services due to Infectious Disease Interventions – a Modelling Study" (OptimAgent)	
10:15 - 10:30	Julia Mayer (Charité – Berlin University of Medicine) "Modelling the added value of a monoclonal antibody administration at the beginning of their first RSV season for infants born to vaccinated mothers"	
09:00 - 10:30	**CONTRIBUTED TALKS VIII - Methodological research & transmission dynamics** *Chair: tba/ Co-Chair: tba*	Room 3
09:00 - 09:15	Jan Pablo Burgard (Trier University) "Gesyland: Georeferenced Synthetic Population of Germany" (OptimAgent)	
09:15 - 09:30	Seba Contreras (Max Planck Institute for Dynamics and Self-Organization) "Testing artifacts may explain increased observed bacterial STI prevalence linked to HIV Pre-exposure Prophylaxis (PrEP): a modeling study" (RESPINOW/infoXpand)	
09:30 - 09:45	Ashish Thampi (NET CHECK GmbH, Berlin) "Historical community boundaries in Berlin as barriers for epidemic spread" (OptimAgent)	
09:45 - 10:00	Ye Eun Bae (German Research Center for Artificial Intelligence GmbH) "Prognostic Influences on Trust and Risk Perception: Agent-Based Simulation of Health Protection Motivation During Pandemics" (SEMSAI)	
10:00 - 10:15	Kristina Maier (Zuse Institute Berlin) "Hybrid ABM-PDE Models for Modeling Infection Spreading" (MODUS-COVID)	
10:15 - 10:30	Matthieu Domenech de Cellès (Max Planck Institute for Infection Biology) "Immune boosting and the perils of inferring pertussis infection burden from seroprevalence studies: A mathematical modeling study"	
10:30 - 11:00	*COFFEE BREAK*	Lounge
11:00 - 12:30	**MINI-SYMPOSIUM III - Advanced Modelling Methods in Public Health and Infectious Disease Surveillance** *Moderation: Alexander Ullrich*	Aula
	Ann Christin Vietor (Robert Koch Institute) "Collaborative development of a framework for automated signal detection for infectious disease outbreaks"	
	Matthias an der Heiden (Robert Koch Institute) "Estimate excess mortality from time series data for mortality"	
	Johannes Bracher (Karlsruhe Institute of Technology) "A statistical assessment of influenza intensity thresholds from the moving epidemic and WHO methods"	
	Frank Sandmann (Robert Koch Institute) "Development of a nowcasting pilot for severe respiratory hospitalisations in Germany, and the potential future use and direction of nowcasting in public health"	
12:30 – 13:30	**CLOSING CEREMONY & AWARDS** *A. Kuhlmann & B. Lange & R. Mikolajczyk*	Aula