

## 2<sup>nd</sup> National Conference on Infectious Disease Modeling 2024

### Venue

Leopoldina National Academy of Sciences  
Jägerberg 1  
06108 Halle (Saale)

### Date

Wednesday, 13 March to  
Friday, 15 March 2024\*

\*On 15 March 2024, only internal sessions of  
the modeling consortia will take place.

### Conference in social media

#MONID2024

## Programme

Time	Wednesday - March 13, 2024	Room
09:00 - 09:55	REGISTRATION	Foyer
10:00 - 10:45	<b>WELCOMING</b> <i>Moderation: A. Kuhlmann, R. Mikolajczyk</i>  Welcome from the MONID Board ( <i>Highlights</i> ) Dean of the Medical Faculty Prof. Dr. Heike Kielstein Parliamentary State Secretary Mario Brandenburg ( <i>Video.</i> ) RKI President Prof. Dr. Lars Schaade ( <i>live</i> )	Festsaal
10:45 - 11:45	KEYNOTE I – Julia Fitzner (WHO) “A complex world needs joint efforts to take best decisions” <i>Moderation: A. Kuhlmann</i>	Festsaal
11:45 - 12:15	ELEVATOR PITCHES <i>Moderation: A. Kuhlmann</i>	Festsaal
12:15 - 14:00	LUNCH BREAK	
	13:15 - 15:15 SAB und SG Meeting	Präsidiumsraum
14:00 - 16:00	POSTERSESSION <i>Moderation: J. Horn &amp; V. Jäger</i>	Vortragssaal
16:00 - 16:30	COFFEE BREAK	
16:30 - 17:30	<b>ORALS I "Technical Application"</b> <i>Moderation: J. Hasenauer</i>	Festsaal
	Kai Nagel: "Explicit modeling of antibody levels for infectious disease simulations in the context of SARS-CoV-2"	
	Elizabeth Goult: "Estimating the optimal age for infant measles vaccination"	

	Beryl Musundi: "Multi-scale Modeling of Infectious Diseases: Linking Within-host and Between-host Dynamics"	
	Martin Kühn: "Hybrid epidemiological models for efficient insight on the individual scale: a contribution to green computing"	
	Philipp Dönges: "When and why weakly-coupled compartmental models can be used for simultaneously spreading diseases"	
	Antonia Bartz: "Guidelines on quality assessment and reporting of mathematical modelling studies for infectious disease dynamics: A scoping review"	
17:30 - 18:45	<p><b>PANEL I – "Contacts and diversity in models"</b>  <i>Moderation: A. Karch &amp; A. Kuhlmann &amp; R. Mikolajczyk</i></p> <p>Luca Ferretti: "Insights into transmission risk and drivers of epidemic dynamics from digital contact tracing"  Veronika Jäger: "Different ways to collect contact information"  Jan Pablo Burgard: "Gesylant - A Synthetic Twin Population of Germany" (<b>online</b>)  David Kerkmann: "Estimating contact patterns for agent-based models"  Beate Jahn: "Measuring Health Inequality – Methodological Approaches &amp; Challenges"</p> <p><i>Discussion</i></p>	Festsaal
18:45 – 19:00	<p>SPECIAL LECTURE - Stefan Moritz: "Restart – when science hits the stage"  <i>Moderation: R. Mikolajczyk</i></p>	
19:00 – 22:00	GET-TOGETHER	

Time	Thursday - March 14, 2024	
09:00 - 10:00	<p>KEYNOTE II – Niel Hens (Hasselt University)  "COVID-19 – From first data to models and back"  <i>Moderation: A. Kuhlmann</i></p>	Festsaal
10:00 - 11:00	<p><b>ORALS II "Agent-based Models"</b>  <i>Moderation: N. Leithäuser</i></p>	Festsaal
	David Kerkmann: "Implementation of a highly detailed agent-based model to explore the effects of non-pharmaceutical interventions and testing strategies in Brunswick during the SARS-CoV-2 pandemic"	
	Johannes Horn: "Modelling the impact of mass gathering events (MGE) on potential future pandemics"	

	Johannes Ponge: "How to Make Large-Scale Individual-Based Infectious Disease Models Fast"	
	Franciszek Rakowski: "Post-hoc Analysis of Covid-19 Mortality in Poland: Insights from the ICM Epidemiological Model"	
	Tyll Krüger: "Factoring out the contribution of households to COVID-19 prevalence across European countries"	
	Beate Jahn: "Evaluation of Vaccination Strategies Considering a Vaccine Adapted to a New Variant of Concern – A Decision-Analytic Modeling Study"	
11:00 - 11:30	COFFEE BREAK	
11:30 - 12:30	<b>ORALS III "Behaviour"</b> Moderation: <i>A. Calero Valdez</i>	Festsaal
	Leonard Stellbrink: "Comparative Modeling of Pandemic Behavior: Static vs. Dynamic Agent-Based Approaches"	
	Lilian Kojan: "Modeling intervention compliance behavior: Insights from a cross-sectional survey"	
	Veronika Kurchyna: "Generation of Consistent Agent Plans using Strategy Patterns and Axiomatic Logic" ( <b>online</b> )	
	Sabine Wüst: "Modelling the influence of environmental stressors on the spread of communicable diseases"	
	Matthias Horn: "Mathematical modeling of pneumococcal transmission and disease dynamics in the German population"	
	UPDATE MONID BOARD & POSTER AWARDS <i>A. Kuhlmann &amp; R. Mikolajczyk &amp; B. Lange</i>	Festsaal
13:00 - 14:15	LUNCH BREAK	
14:15 - 15:15	<b>ORALS IV "Data acquisition &amp; Fitting"</b> Moderation: <i>M. Scholz</i>	Festsaal
	Jan Mohring: "Estimating the Covid-19 Prevalence from Wastewater"	
	Nina Schmid: "Demonstration of an Integrative Modelling Approach of Infectious Diseases"	
	Karina Wallrafen-Sam: "Cost-Effectiveness of COVID-19 Vaccination Strategies in Resource-Constrained Settings: Data from Ethiopia"	
	Yuri Kheifetz: "Modelling complete dynamics of SARS-CoV-2 pandemics of Germany and its federal states using multiple levels of data"	
	Felix Günther: "Fitting a dynamic transmission model of meningococcal carriage and vaccination to national	

	surveillance data and the vaccine coverage in Germany, 2005-2019"	
	Isti Rodiah: "Improving post-pandemic RSV projections in Germany: A comprehensive approach integrating adaptive dynamic modeling and population-based data - RESPINOW Study"	
15:15 - 16:30	<p><b>PANEL II – "Modeling and model parametrization for respiratory infections"</b>  <i>Moderation: M. Kühn &amp; B. Lange</i></p> <p><i>Intro – B. Lange &amp; M. Kühn: „Ongoing work in four selected research consortia, open problems and approaches“</i></p> <p>Sarah Kramer: „Parameterizing Models of Cocirculating Pathogens: Using models to characterize pathogen-pathogen interactions“</p> <p>Ullrich Köthe: "Solving inverse problems with machine learning"</p> <p>Stefan Flasche: „Uncertainties in parametrizing vaccination strategies for respiratory infections“</p> <p><i>Discussion – B. Lange &amp; M. Kühn: „Current challenges in parametrization of mathematical-epidemiological models“</i></p>	Festsaal
16:30 - 17:00	COFFEE BREAK	
17:00 - 17:30	<p><b>YOUNG MONID PANEL</b>  <i>Moderation: B. Musundi &amp; M. Harries</i></p>	Festsaal
17:30 - 19:00	<p><b>PANEL III – "Adaptive behaviour in modelling"</b>  <i>Moderation: B. Lange</i></p> <p>Viola Priesemann: "The role of behavioral reactions to high case numbers"</p> <p>Michael Maes: "Protective Behavior, Opinion Polarization, Disease Dynamics."</p> <p>Lilian Kojan: " (How) can we utilize behavioral science for epidemiological modeling"</p> <p>Kai Nagel: "Quantitative findings of the effect of mobility on infection spreading, and of disease indicators on mobility"</p> <p>Mirjam Kretzschmar: "Impact of adherence and stringency on the effectiveness of lockdown measures"</p>	Festsaal
19:00 - 19:10	<p>FAREWELL &amp; ORAL PRESENTATION AWARD  A. Kuhlmann &amp; R. Mikolajczyk &amp; B. Lange</p>	Festsaal

INTERNAL SESSIONS OF THE CONSORTIA		
Time	Friday - March 15, 2024	Room
08:30-15:00	OptimAgent + RESPINOW	Vortragssaal
09:00-13:00	INSIDe	Festsaal
09:00-12:00	PROGNOSIS	Seminarraum 3
09:00-12:00	SEMSAI	Seminarraum 2
09:00-13:00	MODUS-Covid	Seminarraum 1
	infoXpand – 5-day infoXpand workshop in February 2024 in Göttingen	