Social Simulation Conference 2024

Conference Programme

CEST (Warsaw local time) is used

Partners:

16.IX. Monday – Workshops

10:30-13:30	Parallel Workshops I

A. Technical and non-technical aspects of modelling human decisions
Organisers: Loïs Vanhée, Melania Borit, Friederike Wall, Vivek Nallur

B. A roadmap to exascale agent-based modelling
Organisers: Matt Hare, Gary Polhill, Doug Salt, Ricardo Colasanti, Alison Heppenstall, Richard Milton, Michael Batty

C. AI Agents Based Simulations in Science, Technology, and Society (STS) studies: Participatory Prompts for Stakeholder Negotiations
Organisers: František Kalvas, Roman Mouček, Denisa Reshef-Kera, Galit Wellner, Eilat Navon

D. Short introduction to the Gama platform
Organisers: Kevin Chapuis, Arnaud Grignard

13:30 - 14:30	Lunch

14:30 - 17:30	Parallel Workshops II

A. Qual2Rule Workshop: Using qualitative data to inform behavioural rules in agent-based models
Organisers: Melania Borit, Christopher Frantz, Ruth Meyer

B. An introduction to programming ABM simulations with the Julia language
Organizer: Przemysław Szufel

C. Integration of contemporary models of behaviour and decision-making from Psychology into ABMs – What is the state of the art?
Organisers: Jason Thompson, Fjalar de Haan

D. ESSA@work

18:00 - 22:00	SSC Informal Social event for PhD students and Early Career Researchers

Organisers: Katharina Luckner, Timo Szczepanska, Cristina Chueca Del Cerro

17.IX. Tuesday

09:00 - 09:30	Opening

09:30-10:30	Keynote Speaker: Elżbieta Richter-Wąs

10:30 - 11:00	Coffee-break

11:00 - 12:30	Parallel Sessions I

A. General Track
Chair: TBA

131	Revealing visions of the future of exascale agent-based social simulation using participatory systems modelling	Matt Hare, Doug Salt, Ric Colasanti, Richard Milton,	long	25 min

			Michael Batty, Alison Heppenstall and Gary Polhill		
77	Strongly Empirical Modelling		Bruce Edmonds, Dino Carpentras and Edmund Chattoe-Brown	long	25 min
26	Context-sensitive game players: How context-specific expectations affect the emergence of group conflict, peace, and dominance in Hawk-Dove and Nash Demand		Christopher Watts and S M Amadae	long	25 min
2	Generative Interpretation		Martin Neumann and Davide Secchi	abstract	15 min

B. Sense & Sensibility: Modelling human deliberation and decision-making
Chair: Loïs Vanhée, Friederike Wall, Melania Borit, Vivek Nallur

63	How Interdisciplinary Are Agent Based Models in General and Those of Human Decision in Particular? A Bibliometric Analysis		Loïs Vanhée and Melania Borit	long	25 min
117	Towards understanding collective resource use: the role of individual attribution of ecological change		Nanda Wijermans, Caroline Schill, Therese Lindahl and Maja Schlüter	long	25 min
95	Fostering the Linkage Between Agent-based Modeling and Ontologies: A Research Agenda		Rocco Paolillo, Andrea Giovanni Nuzzolese, Carmelo Fabio Longo, Misael Mongiovì, Lorenzo Giammei, Giusy Giulia Tuccari, Antonio Zinilli, Mario Paolucci and Giovanni Cerulli	abstract	15 min
125	An agent-based framework for modelling linked decisions		Sascha Holzhauer and Friedrich Krebs	abstract	15 min
19	Integrating Real-World Data into Agent-Based Models for Urban Cyclist Exposure		Rok Novak, Maria Alejandra Rubio Rojas, Davor Kontić, Janja Snoj Tratnik and David Kocman	abstract	15 min

C. Social Simulations for Sustainable Development Goals (SDG)
Chair: Herewith Keith Larson, Frank Dignum

10	Bringing Life Cycle Thinking to Social Simulation: Empirical Agent-based Simulation of the Sustainable Diffusion of Circular Business Models		Ryu Koide, Shinsuke Murakami, Haruhisa Yamamoto and Keisuke Nansai	long	25 min
87	Modeling Racial/Ethnic Disparities in Diet: An Agent-Based Approach to Understanding Diet Dynamics in Philadelphia		Andres Useche, Ivana Stankov and Brent Langellier	abstract	10 min
28	A participatory mixed methods approach to formalizing behavioral insights for agent-based modelling of the energy transition		Lynn de Jager, Liesbeth Claassen, Emile Chappin and Geeske Scholz	abstract	10 min
9	Relationship Between Family Grant Program and Social Inequality in Brazil: An Agent-Based Model		Edgar Oliveira and Diana Adamatti	short	20 min
70	Mapping sustainable development goals using Agent-Based Models		Indushree Banerjee and Maurits Ertsen	abstract	10 min
52	Health-Economic Synergies of Carbon Emission Reduction Policies		Ting Xie	short	20 min

12:30 - 13:30	Lunch	

A.   General Track
Chair: TBA

30	Vahana.jl - A framework (not only) for large-scale agent-based models	Steffen Fürst, Tim Conrad, Carlo Jaeger and Sarah Wolf	long	25 min
27	A Topology of Complex Systems	Davide Secchi and Martin Neumann	long	25 min
75	Real time Parameter Changes in Agent-Based Models with Mesa	Rajith Vidanaarachchi, Branislava Godic, Leon Booth, Victoria Farrar, Simone Pettigrew and Jason Thompson	long	25 min
116	Towards realism for policy making	Maarten Jensen, Loïs Vanhée and Frank Dignum	abstract	15 min
88	Realistic gossip in a Trust Game on networks	Jan Majewski and Francesca Giardini	long	25 min

B.   Polarisation and reconciliation
Chair: Wander Jager

33	Gaming Polarisation: Using Agent-Based Simulation as a Dialogue Tool	Shaoni Wang and Wander Jager	long	25 min
4	Ruthless advocacy or avoidance of conflict? How argumentation styles affect consensus outcomes in groups with divergent preferences	Jonas Stein, Jan-Willem Romeijn and Michael Mäs	long	25 min
13	Perceived and Actual Opinion Polarisation in the German Climate Change Debate	Peter Steiglechner, Paul Smaldino and Agostino Merico	short	20 min
25	Partisanship, Polarization and Preferences: An Agent-Based Model of Sorting	Weize Zhao and Gordon Brown	short	20 min
76	An agent-based simulation of Online Rumor Diffusion Incorporating Individual Attitudes and Opinion Leaders	Lingyue Li, Yike Luo and Hang Xiong	abstract	10 min

C.   Empirical Agent-Based Modeling
Chair: Dino Carpentras, Bruce Edmonds

46	Neural Surrogates of Agent-Based Models to Learn from Micro-Data	Francesco Cozzi, Corrado Monti, Marco Pangallo, Alan Perotti and André Panisson	abstract	15 min
82	Towards empirical representative ABM: Analyzing social influence in the context of climate change adaptation	Thorid Wagenblast, Tatiana Filatova, Amineh Ghorbani and Martijn Warnier	abstract	10 min
36	Death, Taxes and Inequality: Can a Minimal Model Explain Real Economic Inequality?	John Stevenson	short	20 min
100	Lessons for agent-based social simulation from a screening exercise in a systematic literature review on high-performance computing use	Doug Salt, Alison Heppenstall, Ricardo Colasanti, Richard Milton, Matt Hare, Michael Batty and Gary Polhill	short	20 min

71	Simulating reality- challenges of modelling human-wildlife coexistence using ABM	Indushree Banerjee and Maurits Ertsen	abstract	15 min
99	Using Agent-Based Simulations to Study Organizational (Re)production of Inequalities: Training Investments and Retirement	Konrad Turek, Shaoni Wang, Wander Jager, Kees Zoethout, Patrycja Antosz and Kene Henkens	abstract	15 min
58	Inverse Generative Social Science for Identifying Stochastic Agent-Based Models	Minh Kieu and Gayani Senanayake	short	20 min

15:30 - 16:00	Coffee-break

16:00 - 17:30	Parallel Sessions III

A. Microsimulation and Agent-based Modelling
Chair: Corinna Elsenbroich, Alison Heppenstall, Matteo Richiardi

23	Exploring the complex behaviours of electric vehicle drivers based on an Agent-based Reinforcement Learning method	Zixin Feng, Qunshan Zhao and Alison Heppenstall	long	25 min
123	Different Bottom-Up Simulation Methods and Policy Applications: A Perspective	Kavin Preethi Narasimhan	short	20 min
103	Agent-based and microsimulation modelling for tax-benefit policy analysis: Implications for policymaking	Jesse Lastunen, Jia An Liu and Serge Stinckwich	abstract	15 min
45	Optimal Placement of Healthcare Facilities Based on Patient Attractiveness Assessment	Kazuhito Matsushita and Setsuya Kurahashi	abstract	15 min

B. NISE: Norms and Institutions in the Social Environment
Chair: Christopher Frantz, Amineh Ghorbani

41	Blueprinting Organ Donation: A Policy-first Approach for Developing Agent-based Models	Michael Belfrage, Christopher Frantz, Bertilla Fabris and Fabian Lorig	long	25 min
50	Money as a mechanism of generalized cooperation: an agent-based model	Eduardo Ferraciolli, Tanya Araujo, Francesco Renzini and Flaminio Squazzoni	abstract	15 min
31	The Adoption of Pro-Environmental Behaviour: Can Dynamic Norms Explain How Small Scale Change Leads to Large Scale Change?	Fernanda Reintgen Kamphuisen, Thijs Bouman, Ellen Van der Werff and Nanda Wijermans	abstract	15 min

C. Population Synthesis
Chair: Gary Polhill, Mario Paolucci, Rocco Paolillo, Clémentine Cottineau, Tatiana Filatova

60	Generating Spatial Synthetic Populations Using Wasserstein Generative Adversarial Network: A Case Study with EU-SILC Data for Helsinki and Thessaloniki	Vanja Falck	long	25 min
108	Towards Dynamic Population Synthesis Through the Use of Machine Learning	Iohan Sardinha, Mariam Afonso, Jadna Cruz, Rosaldo Rossetti and Ana Paula Rocha	short	20 min
48	Outlining some requirements for synthetic populations to initialize agent-based models	Nick Roxburgh, Rocco Paolillo, Clémentine	abstract	15 min

		Cottineau, Tatiana Filatova, Mario Paolucci and Gary Polhill		
17:30 - 19:30	Reception & Poster Session			

18.IX. Wednesday

09:00-10:00	Keynote Speaker: Guilluame Duffant			
10:00 -10:30	Coffee-break			
10:30-12:00	Parallel Sessions IV			

A. General Track
Chair: TBA

133	Nobody wants to play with ABSS, because we are so little and they are BIG. What an injustice it is!	Harko Verhagen, Nanda Wijermans, Bruce Edmonds and Wenyue Hua	short	20 min
79	Bringing worlds together: When public health and social simulation approaches collide	Branislava Godic, Ivana Stankov, Rajith Vidanaarachchi and Jason Thompson	short	20 min
74	Modelling for Policy Without Policy Modelling	Alexander Melchior and Frank Dignum	short	20 min
135	Towards synthetic city modeling for synthetic populations	Przemyslaw Szufel and Adam Kasiński	abstract	10 min
7	Episode Map for Stakeholder Engagement in Co-creating Modeling	Nagomi Sakai, Akinobu Sakata and Shingo Takahashi	long	25 min

B. Complexity in Organization, Management, and Economics
Chair: Stephan Leitner, Friederike Wall

11	On the effects of decision-making modes on organizational resilience	Stephan Leitner	long	25 min
118	Predicting governance failures in community-based enterprises through a transdisciplinary Agent-Based Modelling instrument	Arthur Feinberg, Amineh Ghorbani and Tine de Moor	abstract	15 min
129	Assessing Effectiveness of Anti-Money Laundering System with Agent-Based Model	Łukasz Kraiński	long	25 min
110	Combining Vignette Surveys with Agent-Based Modeling: Insights on Fraud Dynamics with Empirically Calibrated Norm Sensitivities	Alexandra Eckert, Matthias Meyer and Christian Stindt	long	25 min

C. Simulation in Crises
Chair: Francesca Giardini, Loïs Vanhée, Christian Kammler

1	Modeling dynamics of collective opinion on social media during the crisis of the Corona Virus Pandemic: A Hybrid Data-driven Agent based	Morteza Mahmoudzadeh, Vahid Khalili Param and Parinaz Kiavash	long	25 min

	modeling Approach with Opinion Dynamics models and Bayesian Belief Networks			
35	How to get people to leave: Exploring the influence of warning message informativity on the evacuation of large-scale events	Ruth Meyer, Amelie Schmidt-Colberg, Antonio Kruse and Corinna Koepke	short	20 min
73	Democracy in Crisis: Using Social Simulation to Explore Policies for Countering Radicalization	Nikitas Marinos Sgouros	long	25 min
69	Evaluation of Infection Prevention Measures in Elementary Schools using an Agent-Based Model	Shuta Kikuchi, Taisei Mukai, Keisuke Nakajima, Yasuki Kato, Takeshi Takizawa, Junichi Sugiyama, Yasushi Kakizawa and Setsuya Kurahashi	short	20 min

12:00 - 13:00	Lunch

13:00- 14:30	Parallel Sessions V

A. General Track
Chair: TBA

57	The Role of Network Rewiring in Influencing Extremism and Pluralistic Ignorance	Ezgi Topuz and Gönenç Yücel	short	20 min
94	Attitude change through economic narratives	Michael Roos and Matthias Reccius	long	25 min
17	Multi-Agent Reinforcement Learning for Market Competition in Mobility Services	Haruki Sato, Fujio Toriumi and Yukihisa Fujita	long	25 min
109	Modelling Misinformation Spread: The Role of Network Density in Diverse Social Structures	Soroush Karimi, Marcos Oliveira and Diogo Pacheco	short	20 min

B. Qual2Rule: Using qualitative data to inform behavioral rules in agent-based models
Chair: Melania Borit, Bruce Edmonds

24	Text, interviews, and expert coding: Using qualitative and quantitative data in an agent-based model of compliance with Human Rights judgments	Katharina Luckner, Adarsh Prabhakaran, Ula Aleksandra Kos, Aysel Küçüksu, Thorbjørn Lundsgaard and Veronika Fikfak	long	25 min
114	Toward Automating Agent-based Model Generation: A Benchmark for Model Extraction using Question-Answering Techniques	Siamak Khatami and Christopher Frantz	long	25 min
126	Different Facets for Different Experts: A Framework for Streamlining The Integration of Qualitative Insights into ABM Development	Vivek Nallur, Pedram Aghaei and Graham Finlay	long	25 min
49	Situational Data for Agent-Based Modelling	James Allen, Corinna Elsenbroich and Mark McCann	abstract	15 min

C. Social Identity Approach Modelling
Chair: Geeske Scholz, Nanda Wijermans

	124	The selfish social identity: Exploring dynamics of health behaviour, disturbance, resilience, and vulnerability through association	Jason Thompson	long	25 min
	65	Towards a Formalism for the Social Identity Approach	Fjalar de Haan	long	25 min
	113	Beyond Numbers: Qualitative Structural Validation of Social Agent-Based Models	Mijke van den Hurk, Mark Dechesne and Frank Dignum	long	25 min
	97	Morality to Boost Social Identity Modeling?	Marlene Batzke	abstract	15 min

14:30 - 15:00	Coffee-break
15:00 - 15:30	PhD Thesis Award
15:30 - 16:30	Rosaria Conte Award
16:30 - 22:00	Social Event

19.IX.　Thursday

09:30 - 10:30	Keynote Speaker: Andrew Crooks
10:30 - 11:00	Coffee-break
11:00 - 12:30	Parallel Sessions VI

A.　General Track
Chair: TBA

	96	A behavioural agent-based model for housing markets: impact of a financial shock on wealth in the UK	Yahya Gamal, Corinna Elsenbroich, Nigel Gilbert, Alison Heppenstall and Kashif Zia	short	20 min
	67	A Generic Modelling Framework for Last-Mile Delivery Systems	Önder Gürcan, Timo Szczepanska, Vanja Falck, Patrycja Antosz, Merve Seher Cebeci, Michiel de Bok, Rodrigo Tapia and Lóránt Tavasszy	short	20 min
	105	Evolution of consumer price networks in Europe and response to shocks	Emiliano Alvarez	abstract	15 min
	20	Using an Agent-Based Simulation to Investigate Whether Alternating Normal and Abnormal Conditions Could Benefit Individual and Organizational Fitness	Fred Ingram and Dinuka Herath	long	25 min
	39	Terrasim : An Agent-Based Simulation for systemic policy evaluation. Application to electricity mix transition	Tristan Bersoux, Mael Franceschetti, Cédric Herpson and Jean-Daniel Kant	abstract	15 min

B.　Social Networks in Agent-Based Models
Chair: Jennifer Badham, Cristina Chueca del Cerro

8	Assessing resilience in a supply cocaine chain: an agent based modeling	Maykol Rodriguez Prieto	abstract	15 min
107	The Agent-based Model of Online Protest and Repression in Authoritarian Settings	Aytalina Kulichkina, Annie Waldherr and Nanda Wijermans	long	25 min
14	The Echoes from Social Media Platforms: an agent-based model	Cristina Chueca Del Cerro	long	25 min
15	ABMs over networks: parameterising Hamill and Gilbert's (2009) Social Circles	Cristina Chueca Del Cerro and Jennifer Badham	abstract	15 min

C. Sense & Sensibility: Modelling human deliberation and decision-making
Chair: Loïs Vanhée, Friederike Wall, Melania Borit, Vivek Nallur

55	Modeling decision-making of Dutch farmers to understand lock-ins in the transition to a sustainable food system	Natalie Davis, Niko Wojtynia, George van Voorn, Mark Koetse and Brian Dermody	long	25 min
6	Hill-Climbing or Satisficing: Does the Algorithmic Representation of Human Decision-Making in Agent-based Models of Organizations Matter?	Friederike Wall	long	25 min
3	The effect of models of criminal behavior on police interception strategies	Irene S. van Droffelaar, Jan H. Kwakkel, Jelte P. Mense and Alexander Verbraeck	long	25 min
102	The committee curse: why winners in contests are largely overrated	Pantelis Analytis and Katinka den Nijs	abstract	10 min
101	Behavioral Realism in Integrated Assessment Models: Insights from the TransportTransform Agent-Based Model	Luja von Köckritz, Merlin Radbruch, Oreane Edelenbosch, Els Weinans, Detlef van Vuuren and Maja Schlüter	abstract	10 min

12:30 - 13:30	Lunch

13:30 - 14:30	Parallel Sessions VII

A. General Track
Chair: TBA

119	From Surveys to Simulations: Conceptualizing the Design of an Agent Decision-Making Architecture for Renewable Energy Technologies	Stephanie Stumpf, Daniel Sloot and Wolf Fichtner	short	20 min
62	Theorizing (co-) evolution of agent-based modelling and simulation for studying community energy systems: the case of collective energy security modelling	Javanshir Fouladvand	short	20 min
81	Evaluating Calibration Methods for High-Dimensional Agent-Based Models	Kejian Li, Jiaqi Ge and Lomax Nik	abstract	15 min

B. Uncertainty Characterization for Social Simulation
Chair: Vivek Srikrishnan, Tatiana Filatova

92	An analysis of spatial and temporal uncertainty propagation in Agent Based Models	Yahya Gamal, Alison Heppenstall, William	abstract	15 min

			Strachan, Ricardo Colasanti and Kashif Zia		
	83	Using Scenario Discovery to Uncover Tipping in Parameters and Variables of an Agent-Based Model	Gabriel Sher, Alessandro Taberna, Tatiana Filatova and Jan Kwakkel	short	20 min
	5	Structural Sculpting: Making Inverse Modelling Generate and Deal with Flexible Structures	Lukas Schubotz, Emile Chappin and Geeske Scholz	short	20 min

C.   Social Networks in Agent-Based Models
Chair: Chair: Jennifer Badham, Cristina Chueca del Cerro

	53	Simulating Social Network Impacts on Meat-Eating Pat-terns: An Agent-Based Approach	Xitong Dai, Jiaqi Ge, Andrew Prestwich and Tony Craig	abstract	15 min
	56	The Effect of Homophily on Co-Offending Outcomes	Ruslan Klymentiev, Luis E C Rocha and Christophe Vandeviver	abstract	15 min
	98	Should we stop concerts or parties?	Juliette Rouchier and Victorien Barbet	abstract	15 min
14:30 - 15:00		Presidential views			
	134	Past, present, and future of agent-based social simulation modelling - presidential views	Harko Verhagen	long	25 min
15:00 - 15:30		Coffee-break			
15:30 - 17:00		ESSA General Aseembly			
18:00 - 23:00		Conference Dinner			

20.IX.   Friday

09:30-10:30		Keynote Speaker: Volker Grimm			
10:30 - 11:00		Coffee-break			
11:00 - 13:00		Parallel Sessions VIII			

A.   General Track
Chair: TBA

	85	Digital Twins for Decision Support in Regional Transforming Steel Industries	Anna Kravets, Veronika Kurchyna, Jan Ole Berndt and Ingo J. Timm	short	20 min
	93	Agent-Based Social Simulation for Professional Training: What to Know?	David Anzola	long	25 min
	54	Assessing and Improving Literature Review Practices for Agent-Based Models: A Meta-Review	Sebastian Achter, Melania Borit and Matthias Meyer	abstract	15 min
	29	To Eat or Not to Eat: Modeling Food Loss and Waste Behavior at a Hotel Breakfast Buffet	Ivan Puga-Gonzalez, Patrycja Antosz, Ernesto Carrella, Elisa Lori, Caterina Rettore, Markus G.	short	20 min

			Rousseau, F. Leron Shults and Matteo Vittuari		

B. Complexity in Organization, Management, and Economics

Chair: Stephan Leitner, Friederike Wall

61	Consumer Types and E-Retailing Market Concentration: An Agent-Based Approach	Teng Li and Deyi Zhou	long	25 min
132	On the liquidity of the illiquid (hard-to-trade) assets	Marcin Czupryna and Paweł Oleksy	long	25 min
12	A two-levels game structure to link IAM with ABM for social-tipping investigation in climate change mitigation policy support	Adrien Poujon	abstract	15 min
127	A conceptual modeling framework for coordination in multi-team incident response	Cezara-Maria Pastrav and Sofia Karlsson	short	20 min
21	Does Fair Value Accounting fuel Market Instability - Simulative Evidence from a Cobweb Model	Eduard Braun, Christian Hirschmann and Janis Kesten-Kühne	abstract	15 min
115	Bridging two worlds: understanding macroeconomic effects of private climate change adaptation by integrating agent-based models with computable general equilibrium models	Liz Verbeek, Tatiana Filatova, Theodoros Chatzivasileiadis, Alessandro Taberna and Ignasi Cortes Arbues	abstract	15 min

C. Empirical Agent-Based Modeling

Chair: Dino Carpentras, Bruce Edmonds

72	The THEMP approach in agent-based modelling: when theory and empirics meet	Nanda Wijermans, Eva Vriens and Giulia Andrighetto	short	20 min
111	Uncertainty Quantification for Agent Based Models: A Tutorial	Louise Kimpton, Peter Challenor and James Salter	short	20 min
122	Ethical Dimensions to Empirical Applications of Agent-Based Social Simulation	Gary Polhill, Melania Borit, Corinna Elsenbroich, Harko Verhagen and Nanda Wijermans	long	25 min
40	Likelihood-Based Methods Improve Parameter Estimation in Opinion Dynamics Models	Jacopo Lenti, Corrado Monti and Gianmarco De Francisci Morales	abstract	10 min
80	Is Your Model Estimable? Bias and Identifiability in the Bounded Confidence Model	Claudio Borile, Valentina Ghidini, Corrado Monti and Gianmarco De Francisci Morales	abstract	10 min
78	Simulating farmers' adoption of technologies based on cognition: the case of a smart farming technology	Yawen Yu and Hang Xiong	abstract	15 min

13:00 - 13:30	Closing and Student Awards

13:30 - 14:30	Lunch