






SMEEB 2024 Schedule






Day 1

28th May
Tuesday

09:30 – 09:45	Opening	
09:45 – 10:45	 Sara Mitri	Predicting and controlling the ecological dynamics of small bacterial communities
10:45 – 11:15	 Coffee	
11:15 – 11:35	Alan Pacheco	Model-guided discovery and design of plant-associated microbial interaction networks
11:35 – 11:55	Violeta Calleja Solanas	Stochastic and deterministic drivers of temporal variability in species interactions
11:55 – 12:15	Sandro Meloni	Higher-order interactions and the stability of competitive ecological communities on networks
12:15 – 14:30	 Lunch	
14:30 – 15:30	 Tobias Galla	Non-Gaussian random matrices predict the stability of feasible Lotka-Volterra communities
15:30 – 15:50	Teppo Hiltunen	The Impact of Evolution on Ecological Resilience and Recovery in Experimental Microbial Communities
15:50 – 16:20	 Coffee	
16:20 – 16:40	Ernesto Berrios-Caro	Adaptation of bacterial populations exposed to periodic bottlenecks and antibiotic drug pressure
16:40 – 17:00	Massimo Amicone	A competition-detoxification balance controls the evolution of resistance in simple microbial communities.
17:00 – 17:20	Mauro Mobilia	Evolution of cooperative antimicrobial resistance under coupled demographic and environmental fluctuations
17:20 – 17:40	Meike Wortel	The effect of ecological feedback on the evolution of anti-microbial resistance
17:40 – 18:30	Discussion	



Day 2


29th May
Wednesday



09:00 – 10:00	 Giulio Biroli	Dynamical regimes of high-diversity spatially extended heterogeneous ecosystems
10:00 – 10:20	Giulia Lorenzana	Interactions and migration rescuing ecological diversity
10:20 – 10:50	 Coffee	
10:50 – 11:10	Alessia Annibale	Dynamically selected steady states and criticality in non-reciprocal networks
11:10 – 11:30	Francesco Ferraro	Extensions of classical Dynamical Mean-Field Theory and applications
11:30 – 11:50	Giorgio Nicoletti	Spatially disordered environments stabilize competitive metacommunities
11:50 – 12:10	Loic Marrec	Quantifying the impact of genotype-dependent gene flow on mutation fixation in subdivided populations
12:10 – 14:30	 Lunch	
14:30 – 15:30	 Silvia De Monte	Chaotic turnover of strongly interacting species: a deterministic model and its stochastic approximation
15:30 – 15:50	Joseph Baron	Towards a taxonomy of ecosystem interaction structures
15:50 – 16:20	 Coffee	
16:20 – 16:40	Ian Dewan	Adaption through copy number variation of eccDNA in yeast
16:40 – 17:00	Claude Loverdo	Estimating in vivo dynamics of gut bacteria
17:00 – 17:20	Cameron Strachan	Selection and metabolic trade-offs shape fundamental microbial growth strategies in the gut microbiome
17:20 – 18:00	Poster Session	
18:00 – 18:30	Discussion	

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
Day 3 30th May
Thursday

09:00 – 10:00	 Valentina Ros	The multiple equilibria of many-species ecosystems: how many, how stable, how relevant?
10:00 – 10:20	Timur Aslyamov	Theory of Nonequilibrium Response for Markov Jump Processes
10:20 – 10:50	 Coffee	
10:50 – 11:10	Ivan di Terlizzi	Variance Sum Rule for entropy production estimation
11:10 – 11:30	Gian Marco Palamara	Parameter Identifiability in Stochastic Ecological Models
11:30 – 11:50	Amanda Azevedo	Multilevel selection models for microbiomes
11:50 – 12:10	Will Shoemaker	Macroecological laws in coarse-grained microbial systems

12:10 – 14:30  **Lunch**

14:30 – 15:30	 Seppe Kuehn	Simplicity from complexity in microbial communities
15:30 – 15:50	Maxime Ardre	The Role of Extreme Value Theory in Understanding Inoculum Size Effects on Lag Phase Duration
15:50 – 16:20	 Coffee	
16:20 – 16:40	Garima Rani	An entropic insight into growing bacterial colonies
16:40 – 17:00	Amir Erez	Grow now, pay later: when should a bacterium go into debt?
17:00 – 17:20	Carlo Albert	Scaling Laws of Microbial Growth
17:20 – 18:00	Poster Session	
18:00 – 18:30	Discussion	
19:30 onwards	Social Dinner	

Day 4 31st May
Friday

09:00 – 10:00	 Otto Cordero	Substrate complexity leads to the emergence of positive interactions between bacteria
10:00 – 10:20	Enrico Colizzi	Evolutionary modelling of stochastic gene regulation reveals noise-driven adaptation mechanisms
10:20 – 10:50	 Coffee	
10:50 – 11:10	Francesco Zamponi	Emergent time scales of epistasis in protein evolution
11:10 – 12:10	 Anne-Florence Bitbol	Impact of population spatial structure on mutant fixation, from models on graphs to the gut
12:10 – 12:20	Closing	

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keynote abstracts



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posters list

