

# J-BIOT 2025, 24-25 novembre

## Les 1<sup>ères</sup> Journées de la Biologie Théorique

### JOUR 1 LUNDI 24 NOVEMBRE

- 8h30 ☕ Welcome-Accueil
- 9h Guillaume Beslon *Structural mutations set an equilibrium non-coding genome fraction*
- 9h50 Erwan Hingant *Population model of quorum sensing.*
- 10h20 Aurélien Tauzin *Estimating bacterial mutation rate with simulation-based methods (ABC)*
- 10h35 ☕ Coffee Break Posters
- 11h15 Sophie Pantalacci *Serial organs as toy models to reconcile the many views on pleiotropy and its role in evolution*
- 11h45 Sergiu Ivanov *The Busy Beaver Game and Natural Selection: The Case of Rozenberg's Reaction Systems*
- 12h15 Eric Fanchon *The Waddington landscape today*
- 12h45 ☕ Lunch Posters
- 14h15 Diane Peurichard *Mathematical modeling of tissue morphogenesis and regeneration*
- 15h05 Olivier Ali *Hidden in plain stress: Exploring the relationship between pressure-induced stresses and geometry in plant tissues.*
- 15h35 Johanne Auriau *The Topological signature of the heart*
- 15h50 Nicolas Louviaux *A biomechanical cell motility model to study long range cell communication*
- 16h05 ☕ Coffee Break Posters
- 16h45 Maxime Renard *Viscoelastic fluid modeling for biological tissues under large deformations*
- 17h Clement Moulin-Frier *Self-organization of Sensorimotor Agents and Ecosystems through Automated Discovery in the Lenia Cellular Automaton*
- 17h15 Maxime Estavoyer *Exploring morphogenetic pattern formation through a spectral approach*
- 17h45 Mathieu Dedenon *An agent-based model for active nematics and beyond*
- 18h15 🍷 Assemblée Générale de la SFBT

### JOUR 2 MARDI 25 NOVEMBRE

- 8h30 ☕ Welcome-Accueil
- 9h Olivier Gandrillon *Multiscale modeling of the spatial structure of cancer stem cells in tumoroids derived from neuroblastoma patients*
- 9h50 Martin Rosalie *Variable selection using global modelling tool: summer blooms of the algae *Ostreopsis cf. ovata**
- 10h20 Emma Crisci *Constraint-Driven Enumeration of Biologically relevant Elementary Flux Modes in Metabolic Networks Using Hybrid Logic-Linear Programming*
- 10h35 ☕ Coffee Break Posters
- 10h20 Federica Padovano *Modelling the efficacy of CIK cell immunotherapy targeting MET-expressing mesothelioma cells*
- 11h30 Lia Sela *Modélisation mathématique des interactions entre macrophages et cellules épithéliales précancéreuses dans la cavité buccale*
- 11h45 Damian Bimbenet *Exploring how metabolism comes into play with radiations: an agent-based modelling approach*
- 12h Botao Dai *Response to irradiation: role of hypoxia*
- 12h15 Laurence Cherfils *Modèle mathématique pour la croissance tumorale et la cinétique de lactate dans les gliomes*
- 12h45 ☕ Lunch Posters
- 14h15 Annabelle Ballesta *Systems pharmacology and machine learning for optimizing treatments of brain tumors*
- 15h05 Jean Clairambault *The animal body plan revisited and cancer as local failure of its maintenance in tissues*
- 15h35 Thibault Delobel *Integrating glioblastoma plasticity into combination therapy strategies to overcome therapeutic resistance: a quantitative systems pharmacology approach*
- 15h50 Arnaud Millet *Spatial organization of mediated-macrophage chemoprotective niches in solid tumors: A mathematical analysis*
- 16h20 ☕ Coffee Break Posters
- 17h Mathilde Badoual *Modeling the spatiotemporal evolution of irradiated cell populations*
- 17h30 Tri Nguyen-Huu *Can spatial heterogeneity and connectivity improve fishery management?*
- 18h00 🍷 Remise Prix Pierre Delattre