

Legend

Plenary lecture in amphi Malraux

and

Lunches and coffee breaks take place in the *salon des symboles*

Parallel
sessions

M... or S...

Room 301

M... or S...

Room 302

M... or S...

Room 303

M... or S...

Room 308

M... or S...

Room 309

Tuesday 16, afternoon

16:30-17:00 Introduction to the conference

17:00-18:00 Joanna Masel — *The discrete genetic underpinning of eco-evolutionary dynamics*

Inauguration cocktail
(cour sud)

Wednesday 17, morning

8:45-9:45 Florence Débarre – *Evolution of quantitative traits in finite populations*

Coffee break

**S1-1 Phylogenies /
population genetics**

C F Mugal *Integration of
population genetics
theory into phylogenetic...*

T Latrille *Fluctuating
population size in
phylogenetic codon...*

Z He *An MCMC-based
method for Bayesian
inference of natural...*

M Pontz *The effect of
epistasis on local
adaptation with...*

B Werner *Quantifying
somatic evolution in
human cancers by...*

R Bürger *The effects of
epistasis and pleiotropy
on local adaptation*

S1-2 Food web evolution

C Fritsch *A step toward
identifying what really
promotes food webs...*

V S Ananth *Achieving
minimum time pest
eradication by...*

R Ceulemans *Effects of
trait variation on
ecosystem function...*

G Abernethy *Space and
migration in an eco-
evolutionary food web...*

C Vitale *Demographic and
evolutionary feedback
between...*

S1-3 Population dynamics

G M Palamra *Inferring
Mechanisms that Drive
Population Dynamics...*

L Touzot *How negatively
temporally
autocorrelated...*

F Carrara *The dynamics of
stress generation
determine the...*

A Ching *The carrying
simplex in non-
competitive Lotka...*

D Logofet *Backward
prediction in Markov-
chain models...*

C Coste *Using multitrait
population projection
models to analyze...*

**S1-4 Evolutionary
community ecology**

A Daly *Individual-based
modelling of cryptic
coexistence...*

G Barabás *The evolution
of trait variance creates a
tension between...*

C Picoche *How self-
regulation, the storage
effect and their...*

T Depaertere *Entropy
production of microbial
communities*

M Raatz *Being
indispensable ensures
coexistence under...*

Lunch

Wednesday 17, afternoon

* + S Roy *Structural ensemble of an ocean biogeo...*

Lunch

14:00-15:00 Thomas Hansen – *Measurement theory and mathematical modeling*

M1 Discrete and continuous models...

F Chalub *The Variational Formulation of...*

P Czuppon

Demographic fluctuations and...

A Traulsen *Evolutionary games between newly...*

M2 Theory in cultural evolution

J Yeh *Packaged transmission of cultural traits...*

L Fogarty *The mechanics and signatures of...*

S Gavrilets *Evolving institutions for collective action...*

M3 Effects of within-host interactions...

M T Sofonea *Nested dynamics and parasite evolution*

L Pellis *Emergence of drug resistance in HIV: the role of...*

F Bansept *Cross-scale modeling of resistance spread...*

M4 Niche theory

B Vessman *Environmental toxins induce...*

S Diehl *Patterns of trait diversity in evolved...*

C Klausmeier *Microbial cross-feeding: well-mixed...*

M5 Plankton dynamics...

A Rossberg *Dome patterns in planktonic size...*

J Pitchford *Diversity, dynamics and dominance*

A Morozov *Modelling optimal behavioural...*

Coffee break

16:30-16:50 C D Soares *Diffusion approximation for an age-structured...*

16:50-17:10 I Kaj *Analysis of diversity-dependent species evolution...*

17:10-17:30

C Mullon *Gene-culture coevolution and cumulative...*

A Powell *Generative inference for cultural evolution*

E Gjini *Coexistence through co-colonization...*

C Selinger *Multiple infection patterns as indicators of...*

T Koffel *A Niche Theory of Positive Interactions*

S Lion *Niche theory, time scales and environmental...*

G MeszÉna *First principles theory for ecological niche*

A Mitra *Why Plankton Modelers Should Reconsider...*

A-A Anschütz *Niche separation between different...*

J Woodward *Physical Flow Effects Can Dictate Plankton...**

Thursday 18, morning

8:45-9:45 J Draghi – *Narrow paths to innovation in evolutionary models of stabilizing selection and phenotypic noise*

Coffee break

S2-1 Epidemiology 1

**S2-2 Evolutionary
game theory**

**S2-3 Evolution in
structured populations**

**S2-4 Evolution of genetic/
physiological architectures**

10:15-10:35

C Jerry *Simple cancer model as controlled switched system*

T Yakushkina *Fitness Optimization in Replicator Systems...*

T Priklopil *Adaptive dynamics in spatially structured populations*

A Odorico *Evolutionary dynamics of plasticity in a mechanistic gene-...*

10:35-10:55

A Kebir *Optimal control model of tumor treatment in the...*

J Bauer *The Stabilisation of Equilibria in Evolutionary Game ...*

A Neves *Exact fixation probabilities and large population asymptotics...*

A Le Rouzic *Evolution of genetic canalization in complex genetic...*

10:55-11:15

K Heath *Climate change and urban expansion increase Ae. aegypti...*

Z Wu *Equilibrium Distributions of Network Structured Populations*

K Van Benthem *Eco-evolutionary dynamics under multi-scale...*

N Takeuchi *The origin of the central dogma through conflicting...*

11:15-11:35

D S Mandal *A new perspective on the role of natural enemies in pest...*

M Souza *From fixation probabilities to d-player games: an inverse...*

F Lavigne *When sinks become sources: adaptive colonization in asexuals*

S Bourg *The evolution of an allocation trade-off's shape through changes...*

11:35-11:55

R Paton *The ecological and epidemiological consequences of...*

J Peña *A sequential teamwork dilemma*

P Pollett *Infinite-patch metapopulation models: branching...*

C Coton *Evolution of enzyme concentrations in metabolic pathways*

11:55-12:15

M Broom *Generalised social dilemmas: the evolution of...*

F Barraquand *Dynamical behaviour of a stage structured predator...*

M Gonzalez-Forero *The evolutionary and developmental dynamics...*

Lunch

Thursday 18, afternoon

Lunch

S3-1 Evolution of cooperation and sociality

H Toyoizumi *A Markov Model of Eusociality at its Origin*

14:00-14:20

C Gokhale *Origins of human beliefs: a catalyst for cooperation*

14:20-14:40

P Avila *Sex allocation conflict and sexual selection throughout...*

14:40-15:00

G Henriques *Acculturation drives the evolution of intergroup conflict*

15:00-15:20

C Guerin *The Neolithic transition to large-scale societies is favoured...*

15:20-15:40

P Nguyen *Functional gain and loss in the evolutionary transition...*

15:40-16:00

S3-2 Population genetics

C Burny *Dilute and Re-sequence: experimental validation of putative...*

A Desbiez-Piat *The dynamics of adaptive response under strong...*

M Melissa *Traveling-Wave Models of Evolution...*

J Zhou *Modeling higher-order genetic interactions*

D Cheek *Mutation frequencies in a birth-death branching process*

S3-3 Game theory and decision-making

F Dubois *Consequences of multiple simultaneous discoveries on free riding*

M Kleshnina *Learning advantages in incompetent evolutionary games*

L Perry *Collective Action Problem in Heterogeneous Groups...*

S Dridi *Plasticity in evolutionary games*

I Dewan *Run Away!: Optimal predator responses to startle...*

S3-4 Epidemiology 2

M Santer *The evolution of antibiotic resistance on multicopy plasmids*

S Sandhu *Modelling Evolution of Virulence in Populations with...*

R Iritani *Evolution of virulence against juvenile and adult hosts*

A Deka *Individual vaccination choice and optimal budget...*

R Donnelly *Plant virus ecology and evolution: pathogens that modify...*

T Kiszewski *Larval mosquito habitat reduction and...*

Coffee break

16:30-17:30

Steven Frank – *Cancer and aging: How our bodies are designed to be reliable and why they fail* (public)

Wine, cheese and posters

Friday 19, morning

8:45-9:45 Thomas Lenormand – *Sex chromosome degeneration without selective interference*

Coffee break

	M6 Finite population size effects...	M7 Success and stability in bacterial...	M8 Mate preferences: impacts...	M9 Evolution of multicellular life...	M10 Models of Cancer Evolution...
10:15-10:35	G Constable <i>Invasion and extinction...</i>	K Gomez <i>Directional selection rather than functional...</i>	T Aubier <i>Coevolution of male and female mate...</i>	Y Gao <i>Evolution of the irreversible somatic...</i>	D Posada <i>Maximum likelihood estimation of single-cell...</i>
10:35-10:55	C Overton <i>Capturing the quasi-stationary...</i>	J Mitchell <i>The survival of microbial communities, taxa...</i>	C Taing <i>Selection-mutation models with...</i>	Y Pichugin <i>Towards a general theory of reproduction...</i>	S Pénilsson <i>Stochastic modeling of the sequential...</i>
10:55-11:15	T Parsons <i>Pathogen evolution in stochastic...</i>	M Sezik <i>Projections of metabolic supply chain models ...</i>	C Fitzpatrick <i>Can “good genes” maintain male...</i>	R Martinez Garcia <i>Eco-evolutionary consequences of...</i>	B Roche <i>Darwinian immunotherapy: a new approach...</i>
11:15-11:35	C Pokalyuk <i>Diversity patterns in parasite populations...</i>	J McKerral <i>A universal genetic topology in...</i>	M Costa <i>Emergence of homogamy in a two-loci...</i>	G Doucier <i>Evolutionary origins of Darwinian...</i>	C Watson <i>The Evolutionary Dynamics and...</i>
11:35-11:55	V Miro Pina <i>Coalescents with demographic...</i>	S Van Vliet <i>Multi-level selection and the evolution of...</i>	Y Krumbek <i>Fitness variability suppresses mating...</i>	M Staps <i>Emergence of diverse life cycles and life histories</i>	J Townsend <i>Modeling the molecular evolution of...</i>
11:55-12:15	H J Park <i>Population size changes and extinction risk...</i>	S Shibasaki <i>Microbial public goods games in a...</i>		F Labourel <i>Differentiation without aggregation...</i>	S Alizon <i>Modelling the evolution of viral oncogenesis</i>

Lunch

Friday 19, afternoon

Lunch

**S4-1 Ecosystems
dynamics**

N Zavalishin
*Complex Bog
Landscape Model...*

A Dragicevic
*Emergence and
Dynamics of Short...*

S Sandhu *Exploring
the Influence of
Phytoplankton...*

**S4-2 Evolution in va-
rying environments**

H Ten Brink *Optimal
germination times in
unpredictable...*

B Polizzi *Mathemati-
cal analysis for a
multi-scale...*

J-S Pierre *The
maintenance of
polymorphism...*

**S4-3 Evolutionary
community ecology**

S Pettersson
*Proximity to
collapse: mapping...*

K Peterson
*Signatures of
coexistence...*

M Besson *The way
species interaction
shapes the...*

S4-4 Spatial ecology

G Somerville
*Defining biological
spread in...*

L Eigentler
*Metastability as a
coexistence...*

V Lecheval *Morpho-
genesis of networks
in polydomous ants*

**M10 Models of
Cancer Evolution...**

K Stankova
*Improving
Treatment of...*

P Ashcroft *Cancer
evolution in
hierarchically...*

M Williams *Quanti-
fying selection in
somatic genomes*

W Huang *Tradeoffs
in species coevolu-
tion and drug...*

14:00-14:20

14:20-14:40

14:40-15:00

15:00-15:20