

Seminars

Biomathematics Seminars

Our seminars are very informal, where many questions are asked, new ideas are tried on the blackboard, and free discussion is encouraged. All seminars are in English. The program is updated continuously, look out for new titles.

Time and place: **Wednesdays 10:15 - 12, Exactum C124.**

All interested are warmly welcome!

Spring 2020	In this semester, we substitute the seminars with the course Operator semigroups with applications in biology by Barbara Boldin
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Fall 2019	
25 September 2019	Eva Kisdi Adaptive dynamics of pathogens and their hosts
2 October 2019	Sami Lehtinen Allee effect and evolutionary extinction in a mechanistic predator-prey model
9 October 2019	Lei Niu Chaotic attractors in the four-dimensional Leslie-Gower competition model
16 October 2019	Eva Kisdi When being picky broadens the taste: Joint evolution of immigration strategies and local adaptation
22 October 2019	No seminar: The First Nordic Biomathematics Days , 22-23 October
30 October 2019	No seminar: departmental colloquium by Odo Diekmann
6 November 2019	Mats Gyllenberg Difference and differential equations in population biology: History and modelling (abstract: pdf)
13 Nov-18 Dec 2019	Book reading seminar, Karl Sigmund: The calculus of selfishness

Spring 2019	
30 January 2019	Eva Kisdi Local vs distant action and the infective dose of pathogens
6 February 2019	Stefan Geritz Adaptive correlations between seed size and germination time
13 February 2019	Cecilia Berardo Mechanistic derivation of the functional response in predator-prey models: existence and uniqueness of the quasi-equilibrium
20 February 2019	Lei Niu A special case of the stochastic Lotka-Volterra model
27 February 2019	Yuhua Cai Environmental noise classification and the effects on population dynamics
20 March 2019	No seminar: thesis defence of Marcelo Hartmann
27 March 2019	Andrew Reynolds (Rothamsted Research, UK) Toward a "thermodynamics" of collective behaviour: insect swarms as a case study
3 April 2019	Gael Raoul (Centre de Mathematiques Appliquees, Ecole Polytechnique, Paris, France) The Kirkpatrick-Barton model and spatially structured sexual populations (abstract: pdf)
10 April 2019	Arianna Marchionne Modelling past abrupt climate changes
17 April 2019	Marina Ferreira Particle-based models with volume-exclusion constraints and applications to biology (abstract: pdf)

Fall 2018	
12 September 2018	Eva Kisdi Bayes' theorem and the Fermi paradox
20 September 2018	Rossana Vermiglio (University of Udine, Italy) Polynomial Chaos expansions and stability of linear uncertain delay differential equations: a numerical approach for uncertainty and sensitivity analysis and Davide Liessi (University of Udine, Italy) Stability of periodic solutions of delay equations: from Floquet theory to pseudospectral collocation Note the unusual date! Thursday 20 Sept 10-12 in C124
26 September 2018	Cecilia Berardo Adaptive evolution of a functional response with prey-density dependent handling time
3 October 2018	Lei Niu Global dynamics for discrete-time models of three competing species
10 October 2018	Yuhua Cai The effect of environmental fluctuations on the evolution of the settling process in a chemostat
17 October 2018	Eugenia Franco Models of growth and fragmentation for aerosol dynamics
22 October 2018	BIOMATHEMATICS DAY
31 October 2018	cancelled (the speaker is stuck abroad with a cancelled flight)
7 November 2018	Jyri Ollikainen Population dynamical embedding of iterated games of different lengths
14 November 2018	Sami Lehtinen Ecological bistability and evolutionary cycling of timidity of the prey
21 November 2018	Enpei Zhang Stability analysis of a prey-predator model with maturation time

Spring 2018	
17 January 2018	Yuhua Cai Invasion and persistence of a population in a random environment
24 January 2018	Philipp Getto (TU Dresden, Germany) Stem cell population dynamics as differential equations with state-dependent delay
31 January 2018	Lei Niu ODE models of three competing species with linear nullclines
7 February 2018	no seminar (conference in Turin)
14 February 2018	Stefan Geritz Density dependent diffusion and pattern formation
21 February 2018	Eugenia Franco Reformulating a PDE model for droplet dynamics as a delay equation
27 February 2018	Andrea Pugliese (University of Trento, Italy) Epidemiological models structured by parasite load and immune level
14 March 2018	Cecilia Berardo Mechanistic derivation and evolution of a functional response with prey-density dependent handling time
21 March 2018	Francesca Scarabel Numerical bifurcation analysis of equations with infinite delay
28 March 2018	Ruili Fan The evolution of pathogens in a model with explicit within- and between-host dynamics
11 April 2018	no seminar (conference in Leicester)

18 April 2018	Enpei Zhang Evolution of maturation time in a delayed Gause model
25 April 2018	Margherita Galli Vaccination strategies in epidemic models with loss of immunity
2 May 2018	No seminar, Analysis and Dynamics Day

Fall 2017	
20 September 2017	Mats Gyllenberg Dynamics of the multi-type Ricker model
27 September 2017	Eva Kisdi Evolutionary suicide of prey: Matsuda and Abrams' model revisited
4 October 2017	Lei Niu Permanence, impermanence and invasion in models of competition
11 October 2017	Elina Numminen The epidemics of a wild plant pathogen obey the laws of graph theory
18 October 2017	Margareta Segerstahl Major transitions in evolution: an under-explored area of biological dynamics?
1 November 2017	Antti Honkela Bayesian inference of dynamical Gaussian process models of gene transcription and expression
8 November 2017	Torsten Lindström (Linnaeus University, Sweden) Cycles and multiple attractors explained in terms of saturation effects for mixotrophy
22 November 2017	John McNamara (University of Bristol, UK) The importance of individual differences for evolutionary game theory and the evolution of cooperation
29 November 2017	Sami Lehtinen Understanding the Venus flytrap through mathematical modelling
13 December 2017	Ezio Venturino (University of Turin, Italy) Two resources for one population: the case of wild herbivores in natural parks

Spring 2017	
25 January 2017	Lei Niu On heteroclinic cycles of competitive maps via carrying simplices
1 February 2017	No seminar, Oikos conference
8 February 2017	Eva Kisdi Adaptive dynamics of saturated polymorphisms
15 February 2017	Francesca Scarabel ODE approximation of equations with infinite delay
22 February 2017	Mats Gyllenberg Invasion into dimorphic populations under Atkinson-Allen dynamics
1 March 2017	Matti Pirinen Fine-scale genetic population structure revealed by hidden Markov models and unsupervised clustering
15 March 2017	Sami Lehtinen Size-based prey selectivity in Venus flytrap
22 March 2017	Kalle Parvinen (University of Turku) The effect of spatial heterogeneity on evolution in spatial models
29 March 2017	Jarno Vanhatalo Assessing the current and future conservation and management status of Baltic grey seal population with Bayesian state space models

5 April 2017	no Biomathematics seminar (Modelling Biological Evolution 2017 conference in Leicester), but Lutz Fromhage's talk at 3pm in Viikki, Biocenter 3, room 2402
12 April 2017	Troy Day (Queen's University, Canada) Can we use game-theoretic ideas to design evolution-proof drugs?
19 April 2017	Cecilia Berardo (University of Turin, Italy) Modeling prey cooperation and predator learning interactions
26 April 2017	Anna Suomenrinne-Nordvik The functional response in a prey-predator system with active prey group defence
3 May 2017	Ruili Fan Virulence management in a model with explicit within- and between-host dynamics
17 May 2017	BIOMATHEMATICS DAY
18 May 2017	Eugenia Franco: Measures in infinite dimensional spaces Thursday 11-12am in C124
24 May 2017	Bob Holt (University of Florida) Reflections on Apparent Competition: a 40 year Anniversary Note the unusual time: Wednesday 4-5pm in C124

Fall 2016	
14 September 2016	Barbara Boldin (University of Primorska, Slovenia) An extension of the classification of evolutionarily singular strategies in Adaptive Dynamics
21 September 2016	Nicolas Bacaer (Institut de Recherche pour le Développement, UMMISCO, France) Some population models in a random environment
28 September 2016	Sergei A. Nazarov (St Petersburg University & Institute of Mechanical Engineering Problems, Russian Acad. Sci.) A one-dimensional model of branching arteries
5 October 2016	Francesca Scarabel Periodic solutions of a special class of nonlinear renewal equations: Numerical and analytical investigations
12 October 2016	no seminar in Kumpula; we go to Mikael Fortelius' talk in Viikki, Biocenter 3, Telkänpönttö (=room 2402), 3pm
19 October 2016	Eva Kisdi An inverse approach to evolutionary suicide
24 October 2016	BIOMATHEMATICS DAY (note: Monday)
2 November 2016	Lei Niu On the dynamics of competitive systems and applications
9 November 2016	Vladimir Kozlov (Linköping University, Sweden) Permanency of age-structured population model on several temporally variable patches
16 November 2016	Ping Yan (two 45 min talks) (1) Global stability of a Gause-type predator-prey model with quiescence (2) An open question related to strengthened Carleman's inequality
23 November 2016	Helene Weigang Coevolution of patch-type dependent emigration and patch-type dependent immigration
30 November 2016	KaYin Leung (Stockholm University) Unseen but not unimportant: the role of asymptomatic and presymptomatic transmissions in an epidemic
7 December 2016	Brittany Rose Evolution of pathogen mutation probabilities
14 December 2016	Yuhua Cai Resident-invader dynamics of similar strategies in a random environment

Spring 2016	
20 January 2016	Paolo Gidoni (International School for Advanced Studies, Trieste, Italy) An introduction to crawling motility and quasi-static modelling

27 January 2016	Daoxiang Zhang (Anhui Normal University, China) Turing patterns in a predator-prey model
3 February 2016	Shingo Iwami (Kyushu University & JST PRESTO, Japan) Evolution of seasonal influenza viruses in a strain space: A hybrid dynamical system approach
5 February 2016	Francois Massol (University of Lille) Evolution of dispersal in spatially and temporally variable environments: life cycles and informed dispersal Fri 11-12 in D123, note the unusual day!
10 February 2016	Matilda Backholm (Aalto University) Tiny worm tangles
17 February 2016	Chun Fang Dominated splitting and invariant manifolds theorem in Banach spaces
24 February 2016	Mikhail Shubin Bayesian models for the swine flu epidemic
2 March 2016	Daoxiang Zhang (Anhui Normal University, China) Numerical simulation of dispersion in oscillating flow with heterogeneous wall reactions
16 March 2016	Chun Fang Entropy and horseshoe in a Banach space
23 March 2016	Yuhua Cai An introduction to multi-type linear birth-and-death processes in a random environment
6 April 2016	Eva Kisdi Dispersal polymorphism in stable habitats
13 April 2016	Stefan Geritz A diffusion paradox under the microscope
20 April 2016	No seminar: Analysis and Dynamics Days
27 April 2016	Helene Weigang Co-evolution of patch-type dependent emigration and immigration
4 May	Jouko Väänänen Dependence logic and biology

Fall 2015	
9 September 2015	Julia Sánchez Sanz A numerical method for analyzing linear stability in structured population models
16 September 2015	Stefan Geritz The effect of noise and delays on the behaviour of a population: The need to be specific about the underlying mechanisms
23 September 2015	Mats Gyllenberg Mathematical epidemiology: Delay formulation vs compartmental models
1 October 2015	Gianpaolo Scalia Tomba (Tor Vergata University of Rome) Inference in the early stages of an epidemic notice the unusual time: Thursday 1 October 1-2pm in D123
7 October 2015	Helene Weigang & Francesca Scarabel Paper discussion: A New Approach to the Generation Time in Matrix Population Models, by F Bienvenue & S. Legendre, AmNat 185 (2015) 834–843.
14 October 2015	Chun Fang On the dynamics of non-hyperbolic minimal sets for tridiagonal competitive-cooperative systems
21 October 2015	BIOMATHEMATICS DAY
28 October 2015	Fengying Wei (Fuzhou University) Stochastic permanence of an SIQS epidemic model with saturated incidence and independent random perturbations
4 November 2015	Otso Ovaskainen (Dept. Biosciences) A cooking book approach for the mathematical analysis and simulation of spatial-temporal point processes
11 November 2015	Ruili Fan Virulence management: the evolution of virulence in two models with recovery
18 November 2015	Francesca Scarabel Some ideas to test the approximation of periodic solutions of delay equations

25 November 2015	Tom Rosenström Evolution of negative emotions and depression
2 December 2015	Vadim Kulikov Cognitive semantics, dynamical systems and autoencoders
9 December 2015	Helene Weigang The evolution of patch-type dependent immigration and local adaptation

Spring 2015	
14 January 2015:	Mats Gyllenberg When is a population model representable by a system of ordinary differential equations?
21 January 2015:	Roland Zimm Theoretical Evo-Devo: Modelling evolutionary dynamics of animal development
28 January 2015:	Yi Wang (University of Science and Technology of China) Carrying simplex and heteroclinic cycles for competitive mappings Transversality for cyclic negative feedback systems (two 45 min talks)
4 February 2015:	Elina Numminen Climate induces seasonality in pneumococcal transmission
11 February 2015:	Mikhail Shubin Bayesian modelling of the swine flu epidemic
18 February 2015:	Chun Fang Perturbation theory for strongly tridiagonal competitive-cooperative systems
25 February 2015:	John Nagy (Arizona State University) Nothing in cancer biology makes sense except in the light of evolution
11 March 2015:	Sebastian Schreiber (University of California, Davis, US) Should I stay or should I go? An SDE perspective on the ecology and evolution of dispersal in variable environments
18 March 2015:	Tadeas Priklopil (IST Austria) Evolution of decision rules in stopping game problems CANCELLED
25 March 2015:	Yuhua Cai An application of the zero set of the solution of a parabolic equation
1 April 2015:	Francesca Scarabel Delay equations: how to study them with numerical software for ODEs
15 April 2015:	Eva Kisdi Dispersal polymorphism in stable habitats CANCELLED
22 April 2015:	Ari Koistinen (SYKE) Watershed Simulation and Forecasting System of Finnish Environment Institute
29 April 2015:	Helene Weigang Evolution of local adaptation and immigration: An introduction

Fall 2014	
3 September 2014:	Dawei Yang (Soochow University, China) Typical three-dimensional vector fields and Palis conjectures
10 September 2014:	Venkateshan Kannan (Karolinska Institute, Sweden) Towards theory and algorithm for rigorous discretization in applications of information theory
17 September 2014:	Mats Gyllenberg Christians, pagans, and the black death

1 October 2014:	Hans Metz (University of Leiden, The Netherlands) The geometry of macro-evolution: linking the elements of a post-modern synthesis
8 October 2014:	Stefan Geritz Evolved correlations between seed size and germination time
15 October 2014:	Francesca Scarabel An introduction to pseudospectral methods for delay differential equations
22 October 2014:	BIOMATHEMATICS DAY
29 October 2014:	Yuhua Cai The asymptotic behavior of a stochastic SIS epidemic model
5 November 2014:	Rossana Vermiglio (University of Udine, Italy) Numerical stability of linear coupled delay equations/delay differential equations, with application to the Daphnia model
12 November 2014:	Ruili Fan Apoptosis in virus infection dynamics models
19 November 2014:	Matan Shenhav (Department of Biosciences) A ranged metacommunity model utilizing the niche model generated food webs and the allometric scaling laws of the metabolic theory of ecology
26 November 2014:	Chun Fang Ergodic properties of tridiagonal competitive-cooperative systems and a related result for scalar parabolic equations
3 December 2014:	Ping Yan Uniqueness of limit cycles for three-dimensional competitive dynamical systems
10 December 2014:	Helene Weigang The evolution of immigration strategies

Spring 2014	
15 January 2014:	This seminar is rescheduled due to sickness. Instead, Chun Fang continues presenting Roth and Schreiber 2013 JMB.
22 January 2014:	Fengying Wei (Fuzhou University, China) Global asymptotic stability of stochastic nonautonomous Lotka-Volterra models with infinite delay
	AND
	Yuhua Cai (Fuzhou University, China) Existence, uniqueness and stability of the solution to neutral stochastic functional differential equations with infinite delay under non-Lipschitz conditions
29 January 2014:	Yukihiko Nakata (University of Szeged, Hungary) Structured metapopulation epidemic model with infection during transportation
	AND
	Philip Getto (TU Dresden, Germany) Differential equations with state dependent delay and stem cell maturation
5 February 2014:	Thomas Hovestadt (University of Würzburg, Germany) Informed dispersal: From concepts to mechanisms
12 February 2014:	Peter Thomas (Case Western University, USA) On the asymptotic phase of stochastic oscillators
26 February 2014:	Matthew Osmond (University of British Columbia, Canada) Crossing a fitness-valley without the help of Mendel
12 March 2014:	Jaakko Toivonen Adaptive dynamics on an environmental gradient that changes over a geological time-scale
19 March 2014:	Eva Kisdi From the breeders' equation to adaptive dynamics
25 March 2014:	Juha Alho Modelling Incidence of Nuptiality, 13-14 in room BK106
	AND the regular seminar of the week:

26 March 2014:	Samuli Siltanen Four-dimensional X-ray tomography
9 April 2014:	Tadeas Priklopil Simple models of sequential search
16 April 2014:	Helene Weigang The evolution of condition-dependent immigration
23 April 2014:	Ping Yan Determination of several coefficients in nonlinear Lotka-Volterra systems (part 2)
30 April 2014:	two talks, 10:15-11 and 11:15-12 Taneli Pusa Forgiveness in the stochastic iterated prisoner's dilemma
	AND
	Mikko Sillanpää Estimation of heritability using Bayesian mixed model without convergence problems
7 May 2014:	Andy Reynolds (Rothamsted Research, UK) Realising Lévy walks as composite correlated random walks *** AND *** Hierarchical random walks in trace fossils and the origin of optimal search behaviour
14 May 2014:	BIOMATHEMATICS DAY

Fall 2013	
11 September 2013:	Mats Gyllenberg Mechanistic modelling, functional response, and natural selection
25 September 2013:	Stefan Geritz Group defense and the evolution of the predator's functional response
2 October 2013:	Helene Weigang The evolution of condition-dependent immigration: An introduction
9 October 2013:	DYNAMICS DAY
16 October 2013:	Tero Aittokallio & Jing Tang (FIMM) TIMMA - a mathematical model for predicting combinations of druggable targets to block cancer survival pathways
23 October 2013:	BIOMATHEMATICS DAY
30 October 2013:	Ilmari Karonen Numerical solutions of differential equations with widely varying time scales
6 November 2013:	Tadeas Priklopil Sequential search in biology
13 November 2013:	Andy Reynolds (Rothamsted Research, UK) The Lévy walk paradigm: patterns and processes
20 November 2013:	Ping Yan An inverse problem for a tridiagonal competitive system
27 November 2013:	Claus Rueffler Does organismal complexity favor the evolution of diversity?
4 December 2013:	Jukka Corander Reconstruction of population history using Bayesian models for genetic drift
11 December 2013:	Dawei Yang (Jilin University, China) CANCELLED

Spring 2013

23 January 2013:	Mikhail Shubin MCMC and other stochastic computational methods in statistics: the Eternal War with Infinity
30 January 2013:	Elina Numminen Combining phylogenetic and epidemiological understanding to assess probabilities of direct transmission between pairs of individuals, when most of the individuals are unobserved - a study on informativeness of information
6 February 2013:	Thomas Vallier Bootstrap percolation on the grid and $G(n,p)$
13 February 2013:	Laura Roditi (Cornell University) Multi-level selection analysis of a microbial social trait
20 February 2013:	Thanate Dhirasakdanon Evolution of virulence for diseases with both horizontal and vertical transmissions
6 March 2013:	Géza Meszéna (Eötvös University, Budapest) Mathematical niche theory
13 March 2013:	Ilmari Karonen Evolution of polymorphism in a heterogeneous landscape
20 March 2013:	Florence Débarre (University of British Columbia, Vancouver) Social evolution in structured populations of finite size
27 March 2013:	Ping Yan Determination of several coefficients in a nonlinear Lotka-Volterra system
3 April 2013:	Chun Fang Non-hyperbolic minimal sets for tridiagonal competitive-cooperative systems
10 April 2013:	Helene Weigang Evolution of dispersal under a fecundity & dispersal-ability trade-off
24 April 2013:	Tero Aittokallio (Institute for Molecular Medicine Finland) - CANCELLED
15 May 2013:	BIOMATHEMATICS DAY

Fall 2012	
12 September 2012:	Elina Numminen Living in the past - a filtering approach for detailed reconstruction of transmission events of an epidemic on the same day:
12 September 2012:	Joint seminar with the Mathematical Physics group, at 14.15 in C123 Piero Olla (Cagliari University): Branching Brownian motion with anomalous diffusion
19 September 2012:	Reinhard Bürger (University of Vienna) The effects of genetic linkage and gene flow on local adaptation
26 September 2012:	Hans Metz (University of Leiden) Conflict between alleles and modifiers in the evolution of genetic polymorphisms
3 October 2012:	Ken H. Andersen (Technical University of Denmark) Assembly of food-webs of size-structured populations with applications for fisheries management
8 October 2012, 4pm:	Simon Levin (Princeton University) Complex Adaptive Systems and the Challenge of Sustainability in addition to the Wednesday schedule, notice the unusual time and place! Monday 4-5pm in Auditorium CK112
10 October 2012:	Piret Avila (University of Tallinn) A stochastic super-exponential growth model for world population dynamics
17 October 2012:	Eva Kisdi Trade-offs, coexistence and evolutionary branching: constructing and unfolding degenerate singularities in adaptive dynamics
31 October 2012:	Lutz Fromhage (University of Jyväskylä) Cooperation, cuckoldry, cannibalism: a theoretical perspective on mating systems
7 November 2012:	Ilmari Karonen Omniparametric simulation of spatial population models

14 November 2012:	BIOMATHEMATICS DAY
21 November 2012:	Mikhail Shubin How to simulate flu? Using computational methods to study the influenza epidemic in Finland 2009
28 November 2012:	Matthew Osmond (McGill University) Using adaptive dynamics to predict evolution and extinction in changing environments
5 December 2012:	Jaakko Toivonen Evolution and extinction in heterogeneous space with a slowly changing environment
12 December 2012:	Ping Yan Some new results in the Nicholson-Bailey model

Spring 2012	
18 January 2012:	Robert Service A filtering problem for multiple renewal processes
25 January 2012:	Eva Kisdi Group-based assortative mating, magic traits and speciation (or not)
1 February 2012:	Helene Weigang (University of Vienna) The evolution of division of labor in an explicit ecological context
8 February 2012:	Elina Numminen Results from the ABC inference on microepidemics with discussion on the selection of summary statistics
15 February 2012:	Thanate Dhirasakdanon Adaptive dynamics of horizontal and vertical disease transmission
22 February 2012:	Erik Sjöland (Aalto University) Exploring DNA methylation: A fast approximative Singer-Engström-Schönhuth-Pachter algorithm
23 February 2012:	Fabio Dercole (Politecnico di Milano) Generalized Boundary Equilibria (GBE): The transition between persistence and nonsmooth-fold scenario in Filippov systems Note the unusual place and time: CK 107 and Thursday 10-12
14 March 2012:	Chun Fang A relation between dominated splitting and hyperbolicity
21 March 2012:	Ping Yan Dynamics of tridiagonal predator-prey systems
28 March 2012:	Olof Leimar (Stockholm University) Feature saltation and the evolution of mimicry
4 April 2012:	Tadeas Priklopil Mate choice as an optimal stopping problem
18 April 2012:	BIOMATHEMATICS DAY. Program and venue: pdf
25 April 2012:	Olli Tahvonen (Dept. of Forest Sciences) Optimal harvesting of age- and size-structured populations
2 May 2012:	Tom Britton (Stockholm University) Random networks and epidemics (abstract: pdf)
9 May 2012:	Andrzej Jarykowski (Jagellonian University) Network models in epidemiology: Agent-based simulation of outbreaks of multidrug-resistant bacteria in hospitals and of influenza in societies
23 May 2012:	Tatyana Turova (University of Lund) Random graphs models and their applications in neuroscience

Fall 2011

14 September 2011:	Robert Service Independent particle fields conditioned on null observations
21 September 2011:	Robert Service Independent particle fields conditioned on null observations (part 2)
28 September 2011:	Jaakko Toivonen A population model with density dependent diffusion
5 October 2011:	Stefan Geritz Group defence and the predators' functional response
12 October 2011:	Elina Numminen Inference on microepidemics: I am doing it without longitudinal data
19 October 2011:	Chun Fang Dominated splitting for linear skew-product flows
26 October 2011:	Mats Gyllenberg Spectral analysis of Volterra equations Part 2 of this talk will be given on 8 November (Tuesday) 10.15-12.00 in D123
2 November 2011:	Xuxin Yang Multiple solutions for impulsive differential equations with Dirichlet boundary value conditions
9 November 2011:	Ping Yan Asymptotic stability for a periodic eco-epidemiological model
16 November 2011:	Mats Björklund (University of Uppsala) The ecology of speciation: founder effects revisited
23 November 2011:	Thomas Vallier Degree sequence on dynamical random graphs
30 November 2011:	BIOMATHEMATICS DAY
7 December 2011:	Thanate Dhirasakdanon Perturbation analysis of "invasion implies substitution" results
14 December 2011:	Tadeas Priklopil Chaotic dynamics of gene frequencies in condition-dependent mating systems

Spring 2011	
19 January 2011:	Xuxin Yang Permanence of a logistic-type impulsive equation with infinite delay
26 January 2011:	Thanate Dhirasakdanon Kolmogorov's differential equations and positive semigroups on first moment sequence spaces re-scheduled to 16 February
2 February 2011:	Peter Jagers (Chalmers University of Technology) Populations lingering around their carrying capacity
9 February 2011:	Lasse Ruokolainen (Dept. Biosciences) The importance of adaptive consumer movement on the dynamics of metacommunities
16 February 2011:	Thanate Dhirasakdanon Kolmogorov's differential equations and positive semigroups on first moment sequence spaces
23 February 2011:	Robert Service Yaglom limits and quasi-stationary distributions for Markov population processes
2 March 2011:	Chun Fang On the structure of a class of omega-limit sets
9 March 2011:	(break)
16 March 2011:	No seminar: Yuri Kuznetsov's course
23 March 2011:	Eva Kisdi Evolution of pathogen virulence: The curse of the pharaoh revisited

30 March 2011:	Fabio Dercole (Politecnico di Milano) The ecology of exploited fish stocks: Consequences of technological innovation on stock quality and persistence (abstract: pdf)
6 April 2011:	Josef Hofbauer (University of Vienna) Evolutionary game dynamics
13 April 2011:	Xuxin Yang Existence of solution for anti-periodic boundary value problems for second order differential equations with impulses
20 April 2011:	Tadeas Priklopil Mating decisions as an optimal stopping problem
27 April 2011:	Hans Metz Adaptive dynamics of disease strains with partial cross-immunity
4 May 2011:	Ping Yan On the number of limit cycles for three dimensional replicator systems
9 May 2011:	Sander van Doorn (University of Bern) Transitions between male and female heterogamety caused by sex-antagonistic selection exceptional place and time: Monday 14.15, in D340
11 May 2011:	BIOMATHEMATICS DAY
18 May 2011:	Bálint Nagy (College of Dunaújváros, Hungary) Bifurcation diagrams of circadian rhythm models note exceptional place: C124
25 May 2011:	Barbara Szomolay (Imperial College, London) Adaptive responses to dosing protocols in biofilms: a mathematical model exceptional time and place: 13.15pm, in C124
30 May 2011:	Johanna Rämö On finite simple groups of Lie type exceptional time and place: Monday 14.15pm, in D123
20 June 2011:	Thomas Vallier (University of Lund) Bootstrap Percolation on the Random Graph $G_{n,p}$ (abstract: pdf) exceptional time and place: Monday 14 - 16pm, in D123

Fall 2010	
15 September 2010:	Eva Kisdi Dispersal and offspring size-number strategies in heterogeneous environments
20 September 2010:	Mayuko Nakamaru (Tokyo Institute of Technology) The evolution of dispersal under disturbance in a colony-based model NOTE EXCEPTIONAL TIME: MONDAY 15.00-15.45; usual room D123
22 September 2010:	Ilmari Karonen Modelling evolution using individual-based simulations
29 September 2010:	no seminar (Pre-NordForsk conference in Sweden)
6 October 2010:	Pieter Trapman (Stockholm University) The growth of the infinite long-range percolation cluster and an application to spatial epidemics (abstract: pdf)
13 October 2010:	Chun Fang Floquet theory for nonautonomous tridiagonal competitive-cooperative equations
20 October 2010:	Xiaoli Liu Malaria in Finland
27 October 2010:	Bob Kooi (Vrije Universiteit Amsterdam) Ecological modelling, adaptive dynamics and bifurcation analysis
3 November 2010:	Elina Roto Exploring bacterial populations: the paradox of pneumococci
10 November 2010:	Petr Ondracek Evolutionary dynamics of fast-slow resource-consumer structured metapopulation model

17 November 2010:	Jaakko Toivonen An adaptive trade-off between seed size and germination time
24 November 2010:	BIOMATHEMATICS DAY
1 December 2010:	Tadeas Priklopil On invasion boundaries and unprotected coexistence
8 December 2010:	Akira Sasaki (Kyushu University) A theoretical study for the phylodynamics of influenza A virus

Spring 2010	
13 January 2010:	Minus van Baalen (Université Pierre et Marie Curie) Evolution in host-pathogen interactions and other systems: What is the relevant unit of adaptation?
20 January 2010:	Petr Ondracek Fast-slow cycles of population dynamics and the evolution of density-dependent dispersal
27 January 2010:	Thanate Dhirasakdanon (Arizona State University) Analysis of a hybrid discrete/continuous-time model of infectious diseases in salamander population with ephemeral larval habitats
3 February 2010:	Robert Service Point processes on symmetric spaces
10 February 2010:	Andre de Roos (University of Amsterdam) The effect of ontogenetic asymmetry in net-biomass production on ecological communities
17 February 2010:	Ping Yan Global asymptotic stability of probability distribution solutions of nonautonomous master equations
24 February 2010:	Tadeas Priklopil Evolutionary branching of a magic trait
3 March 2010:	Margarete Utz Variability within families and the evolution of body condition dependent dispersal
17 March 2010:	Eva Kisdi Epigenetic heritability
24 March 2010:	Bas Kooijman (Vrije Universiteit Amsterdam) Dynamic Energy Budget theory for metabolic organisation Summary, slides, supporting material: http://www.bio.vu.nl/thb/users/bas/lectures/ Background on DEB theory: http://www.bio.vu.nl/thb/research/bib/Kooy2011a.html
31 March 2010:	Robert Service Invasion of non-equilibrium environments
7 April 2010:	Eva Kisdi Coevolution of hosts and parasites
21 April 2010:	Shinji Nakaoka (University of Tokyo) Mathematical models for immune cell growth and differentiation CANCELLED DUE TO AIR TRAFFIC DISRUPTION, will be re-scheduled later
28 April 2010:	Xiaoli Liu An eco-epidemiological model in two competing species
5 May 2010:	Ido Filin Target size and optimal life history when individual growth and energy budget are stochastic
18 May 2010:	Len Thomas (University of St. Andrews) Distinguishing between candidate models of density dependence in grey seal populations NOTE EXCEPTIONAL TIME: TUESDAY 10-12; usual room D123

Fall 2009

16 September 2009:	Mats Gyllenberg Equations with infinite delay: Blending the abstract and the concrete
23 September 2009:	Siru Varvio Phylo dynamics, virulence and evolutionary epidemiology of a bug
30 September 2009:	Yi Wang Carrying simplex in competitive dynamical systems
7 October 2009:	Ilmari Karonen Living on the edge: trimorphic spatial coexistence on two resources
14 October 2009:	Stefan Geritz Adaptive dynamics and resident-invader dynamics
21 October 2009:	Yi Wang Recent progress in competitive dynamical systems
28 October 2009:	BIOMATHEMATICS DAY: Program and venue: pdf .
2 November 2009:	Rupert Mazzucco (IIASA, Austria) Speciation and the evolution of dispersal strategies on environmental gradients Note unusual place and time! Monday 12:15 - 13:00 in the Dept meeting room
4 November 2009:	Rupert Mazzucco (IIASA, Austria) The influence of boundary conditions on evolutionary branching
11 November 2009:	Petr Ondracek Prey-predator fast-slow cycles in a structured metapopulation model
18 November 2009:	Sebastien Lion (Royal Holloway University of London) Evolution and the genetic and demographic spatial structuring of populations (abstract: pdf)
25 November 2009:	Phil Harrison (Dept. Ecology) Bayesian state-space modelling of metapopulation dynamics in the Glanville fritillary butterfly LAST-MINUTE CANCELLATION: the seminar has to be cancelled now but will be given in spring
2 December 2009:	Wilfried Gabriel (Ludwig Maximilians University of Munich) When is reversible phenotypic plasticity advantageous? (abstract: pdf)
9 December 2009:	Kimmo Eriksson (Mälardalen University) Mathematical modeling of cultural evolution
16 December 2009:	Barbara Boldin HIV co-receptor switch as a consequence of viral evolution in a heterogeneous environment

Spring 2009	
21 January 2009:	Eva Kisdi Superinfections and adaptive dynamics of pathogen virulence revisited: A critical function analysis
28 January 2009:	Tom de Jong (University of Leiden) Understanding conflict is important for life history
4 February 2009:	Ido Filin A diffusion-based approach to stochastic individual growth and energy budget, with consequences to life-history optimization and population dynamics
18 February 2009:	Stefan Geritz A theory of endogenous preference adaptation
25 February 2009:	Ilmari Karonen On cluster approximations of cellular automata
4 March 2009:	Alex Best (University of Sheffield) Trade-offs and the evolution of hosts and parasites
11 March 2009:	Odenna Shagizbaeva Analysis of DNA replication process on the example of budding yeast <i>Saccharomyces cerevisiae</i>
18 March 2009:	Tadeas Priklopil Branching of a magic trait

25 March 2009:	Biomathematics Day: full day seminar starting at 9:30 in D123. Program and venue: pdf . Prior registration by email to eva.kisdi [funny character] helsinki.fi .
1 April 2009:	Vincent Jansen (Royal Holloway University of London) The evolution of dispersal in metapopulations
22 April 2009:	Ping Yan Dynamics of three-dimensional competitive and competitor-competitor-mutualist Lotka-Volterra systems
29 April 2009:	Otso Ovaskainen (Dept. of Biological and Environmental Sciences) Invasion dynamics and the evolution of dispersal in heterogeneous environments
6 May 2009:	Barbara Boldin Introducing a population into a steady community: the critical case, the centre manifold and the direction of bifurcation
13 May 2009:	Radek Erban (University of Oxford) Stochastic modelling of reaction-diffusion processes in biology (abstract: pdf)
14 May 2009:	Radek Erban (University of Oxford) From individual to collective behaviour of unicellular organisms (abstract: pdf) Note the unusual place and time! Thursday 9.15-10 in B120

Fall 2008	
17 September 2008:	Chun Fang Dimension of stable sets and scrambled sets in positive finite entropy systems
24 September 2008:	Hanna Kokko (Dept. of Biological and Environmental Sciences) On population consequences of behaviour and why they matter: Which sex does what, and why?
1 October 2008:	Karl Haderl (University of Tübingen, Germany and Arizona State University) Forward and backward problem of traveling fronts (this lecture is part of a 5-lecture series, see the full program)
8 October 2008:	Hans Metz (University of Leiden, the Netherlands) When does evolution optimize?
15 October 2008:	Petr Ondracek Models of density-dependent dispersal in structured metapopulations
22 October 2008:	Stefan Geritz Evolutionary branching of vector-valued strategies
29 October 2008:	George van Voorn (Vrije Universiteit, Amsterdam) Global bifurcation analysis of ecological models (abstract in pdf)
5 November 2008:	Robert Service Banach spaces and combinatorics
12 November 2008:	Otso Ovaskainen (Dept. of Biological and Environmental Sciences) Can species interactions be inferred from patterns of co-occurrence? - and other inverse problems in mathematical biology
19 November 2008:	Frank Ball (University of Nottingham, UK) Vaccination and intervention strategies for epidemics among a population of households
20 November 2008:	Frank Ball (University of Nottingham, UK) A general model for epidemics with two levels of mixing Note the unusual place and time! Thursday 11-12 in C129
26 November 2008:	Karin Hårding (University of Gothenburg, Sweden) Epidemiology of a lethal disease, in harbour seals and in simplified metapopulation models (abstract in pdf)
3 December 2008:	Gunter Neumann (University of Århus, Denmark) The inverse yield-rate relation stabilizes coexistence
10 December 2008:	Margarete Utz A metapopulation model for the effects of body condition on dispersal behaviour
17 December 2008:	Samuel Alizon (ETH Zurich, Switzerland) Nesting within-host and epidemiological dynamics to study the evolution of infectious diseases

Spring 2008	
16 January 2008:	György Barabás (Eötvös University, Hungary) Coexistence on continuous resource distributions in the Lotka-Volterra model (note unusual time: Wednesday 14:15 - 16 in C130)
22 January 2008:	Barbara Boldin (University of Ljubljana, Slovenia) Superinfections can induce evolutionarily stable coexistence of pathogens
5 February 2008:	Hans Metz (University of Leiden, The Netherlands) Relating the effective population sizes of adaptive dynamics and random genetic drift
12 February 2008:	Éva Kisdi Evolution of virulence: evolutionary branching in a single infection model
19 February 2008:	Ion Petre (Åbo Akademi) A mathematical model for the eukaryotic heat shock response
26 February 2008:	Ping Yan Disease-induced oscillations between two competing species
4 March 2008:	Hans Metz (University of Leiden, The Netherlands) The geometry of macro-evolution
11 March 2008:	Jostein Starrfelt (Division of Ecology) Parent-offspring conflict and dispersal
18 March 2008:	Diana Preteasa Ecology and evolution of symbiosis in metapopulation
1 April 2008:	Hanna Eskola (University of Turku) Timing of reproduction in a mechanistic model
15 April 2008:	Stefan Geritz Difference inclusions and evolutionary chains
6 May 2008:	Thomas O. Svernungsen (University of Oslo) Optimal egg rejection with external cues