

Program

(last update 5 december 2014)

Keynotes: 35' + 10'

Flashes: 7' + 2' (Monday – Tuesday only; meant for postdocs and (a few) PhD's to introduce themselves)

Shorter Talks: 15' + 5'

Monday 8 December 2014

Opening Day: Setting the Scene

09:30 - 10:00 Registration / Coffee and Tea

10:00 - 10:15 Welcome by the Lorentz Center

10:15 - 10:30 Welcome by the organizers

10:30 - 11:15 Keynote **Jef Huisman**: Ecological Complexity

11:15 - 12:00 Keynote **Chris Jones**: Dynamics, data and models in climate

12:00 - 13:15 Lunch @Snellius restaurant

13:15 - 14:00 Setting up discussion groups

14:00 - 14:45 Keynote **Ghandi Viswanathan**: Anomalous Diffusion and Spatio-temporal Dynamics in Ecology

14:45 – 15:30 Keynote **Simon Levin**: Critical Transitions in Space and Time

15:30 - 16:00 Coffee and Tea

16:00 - 18:00 Flash Presentations

18:00 - Posters / Wine-and-Cheese

Tuesday 9 December 2014

09:15 - 10:00 Keynote **Alan Hastings**: Transients and Pulses: Their Role in Understanding Species Coexistence

10:00 - 10:30 Coffee and Tea

10:30 - 12:00 Talks: Biodiversity and Complex Dynamics

12:00 - 14:00 Lunch @Snellius restaurant and Discussions

12:30 - 13:15 This week's discoveries by Jef Huisman: "Chaos and Biodiversity"
(Sitterzaal, ground floor)

14:00 - 14:45 Keynote **Wolf Mooij**: Spatio-temporal Modeling of Aquatic Ecosystems

14:45 - 15:15 Coffee and Tea

15:15 - 16:45 Talks: Aquatic Ecosystems and Plankton Modeling

16:45 - 17:30 Flash Presentations

Wednesday 10 December 2014

09:15 - 10:00 Keynote **Johan van de Koppel & Max Rietkerk**: Mechanisms of Pattern Formation in Real Ecosystems

10:00 - 10:30 Coffee and Tea

10:30 - 12:00 Talks: Pattern Formation

12:00 - 14:30 Lunch @Snellius restaurant and Discussions

14:30 - 15:00 Coffee and Tea

15:00 - 15:45 Keynote **Ehud Meron**: What Can Pattern Formation Theory Tell Us about Desertification and Restoration of Degraded Landscapes?

15:45 - 17:15 Talks: Pattern Formation

19.00 Workshop dinner at Restaurant Malle Jan

Thursday 11 December 2014

09:15 - 10:00 Keynote **John Fryxell**: Animal Movement in the Real World

10:00 - 10:30 Coffee and Tea

10:30 - 12:00 Talks: Movement Ecology

12:00 - 14:30 Lunch @Snellius restaurant and Discussions

14:30 - 15:00 Coffee and Tea

15:00 - 15:45 Keynote **Nigel Goldenfeld**: Fluctuation-induced Patterns and Rapid Evolution in Predator–Prey Ecosystems

15:45 - 16:45 The Latest and Hottest

Friday 12 December 2014

Closing Day: Summaries and Plans

09:15 - 09:45 Summary Talk

09:45 - 10:15 Summary Talk

10:15 - 10:45 Summary Talk

10:45 - 11:15 Coffee and Tea

11:15 - 11:45 Summary Talk

11:45 - 12:30 Keynote **Arjen Doelman**: Workshop Summary, Outlook

12:30 - Lunch @Snellius restaurant and Discussions / Closing

Short talks

Tuesday 10:30 - 12:00 Biodiversity and Complex Dynamics

Ulrike Feudel, Carl von Ossietzky Universität Oldenburg, Germany

Harmful algal blooms: combining excitability and competition

Stefano Allesina, University of Chicago, USA

The stability of large food webs

Rob Pringle, Princeton University, USA

Ecological consequences of spatial overdispersion in termite mounds

Corina Tarnita, Princeton University, USA

Termite mounds can increase the robustness of dryland ecosystems to climatic change

Mara Baudena, Utrecht University, the Netherlands

Revealing patterns of species richness with a novel network tool

Maarten Eppinga, Utrecht University, the Netherlands

Putting ecological models to the test: a snapshot approach

Tuesday 15:15 - 16:45 Aquatic Ecosystems and Plankton Modeling

Horst Malchow, Osnabrück University, Germany

Introductory remarks on mathematical modeling of plankton dynamics

Sergei Petrovskii, University of Leicester, UK

'Biological turbulence' as a generic mechanism of plankton patchiness

Alexey Ryabov, University of Oldenburg

Application of invasion thresholds for the analysis of phytoplankton competition in a water column

Bo Liu, Utrecht University, the Netherlands

Phytoplankton evolution in estuaries under different flow and sediment conditions: An idealised model

Lisa Hahn-Woernle, Utrecht University, the Netherlands

How can we use satellite ocean color observations to estimate the vertical mixing of the upper-ocean?

Wednesday 10:30 - 12:00 Pattern Formation

Mary Silber, Northwestern University, USA

A degenerate Turing bifurcation: Transitions between small amplitude gap, stripe and spot patterns

Edgar Knobloch, Berkeley University, USA

Localized states in periodically forced systems

Jonathan Sherratt, Heriot-Watt University, UK

Wavetrain patterns in cyclic populations

Kenneth Golden, University of Utah, USA

Sea ice, climate change, and polar ecosystems

Wednesday 15:45 - 16:45 Pattern Formation

Sarah Iams, Northwestern University, USA

Pattern-formation in semiarid vegetation: a model comparison

Antonios Zagaris, University of Twente, the Netherlands

Post-bifurcational dynamics of spatiotemporal patterns in advection-reaction-diffusion systems

Jens Rademacher, University of Bremen, Germany

Banded vegetation on slopes and advective reaction-diffusion systems

Thursday 10:30 - 12:00 Animal Movement

David Sims, Marine Biological Association, UK

Biological Lévy walks: old, intrinsic and everywhere but not all the time

Jonathan Potts, University of Sheffield, UK

How close is a complex movement model to reality?

Nick Humphries, Marine Biological Association, UK

The (surprising) efficiency of Lévy foragers

Monique de Jager, ETH Zurich, Switzerland

Collisions drive Brownian motion in self-organized mussel beds

Marcos da Luz, Federal University of Paraná, Brazil

Animal foraging, a new ingredient to the habitat fragmentation problem

Frederic Bartumeus, ICREA-Movement Ecology Laboratory, Spain

Cooking up effective search strategies

Thursday 15:45 – 16:45 The Latest and Hottest

Maarten Boerlijst, University of Amsterdam, the Netherlands

Spatio-Temporal Dynamics of Disease and Predation can promote coexistence in Lotka-Volterra Competition Systems

Hans G. Kaper, Georgetown University, USA

Can we construct a conceptual box model of the northern Atlantic to explain the current hiatus?

Ivan Sudakov, University of Utah, USA

Stability of plankton ecosystems under climate forcing