EVENET – An eco-evolutionary network of biotic interactions

Seminar – biodiversity dynamics modeling

Juliano S. Cabral, University of Würzburg

Ghent University, Campus Ledeganck, 26th January 2017, 11 am

Location: lecture room 11th floor

Mechanistic simulation models for biodiversity dynamics

Biodiversity research is concerned with patterns of species abundance, richness and composition as well as of functional and phylogenetic diversities across space and time. Questions dealing with these patterns have been traditionally addressed with correlative approaches, despite frequent calls for more mechanistic explanations. Recent advances in computational power, theoretical understanding, and statistical tools are, however, currently facilitating the development of more system-oriented, mechanistic models. These models allow for a more adequate assessment of causal relationships, non-equilibrium/transient dynamics and forecasts. I will present an overview of these models, illustrating their properties, theoretical background and key findings with examples developed by my working group Ecosystem Modeling. Finally, perspectives and interesting topics for future studies will be presented.

Juliano Cabral is interested in biodiversity dynamics, including individuals, population, species, and community patterns at different spatiotemporal scales. His work particularly focuses on the ecological, evolutionary and environmental processes responsible for those patterns.

Host and info: Prof. Luc Lens – luc.lens@ugent.be