

Having trouble viewing this email or viewing hyperlinks? Please try our website version on <https://www.nern.nl/links>



*Netherlands Ecological Research Network*

## ***NERN Messages***

*June 2017*

### **HIGHLIGHT**

## ***The Art of Modelling***

Modelling is a crucial part of today's science. Particularly in agronomy, ecology and environmental sciences, where models are used for assessing sensitivity of systems to disturbances or changes in external factors, and for predictions of future system states. This course provides an introduction to modelling. Modelling concepts will be dealt with in detail, going through the basic steps to be taken, from modelling concepts and model design to model use, calibration and validation, sensitivity and uncertainty, linearity and complexity, and reporting on model studies. The main part of the course focuses on systems analysis using dynamic simulation models. The course introduces the participants to the study of the behaviour of ecological systems, and comprises four blocks: 1) conceptual model formulation and quantitative model specification, using concepts such as system, model, simulation, state, rate, feedback, time-coefficient, relational diagram, analysis of dimensions or units, numerical integration methods and discontinuities in integral contents, 2) introduction to partial differential equations for the simulation of spatial processes in one or two dimensions, such as heat flow, mass flow, diffusion of nutrients in soils, and vegetation patterning, 3) introduction to statistical means and inverse modelling to assess how well a model describes experimental data, techniques for parameter estimation and sensitivity analysis, and critical discussion of model outcomes, and 4) time for reflection on own research and modelling plans.

### **1. Workshops / Meetings / Symposia**

- **Symposium: Water Quality modelling in a changing world (14 June 2017)** @ NIOO-KNAW, Droevendaalsesteeg 10, Wageningen, The Netherlands. For more information, please click [here](#).
- **Conference Pedometrics 2017 (26 June – 1 July 2017)** @ Wageningen, The Netherlands. For more information, please click [here](#).
- **NWO Talent Scheme Information Meeting (6 July 2017)** @ NWO Java building, Laan van Nieuw Oost-Indië 300, The Hague, the Netherlands. For more information, please click [here](#).

- **BES Symposium 2017- The Macro-ecology of Alien Species: Patterns, Drivers and Consequences of Global Biotic Exchange (24-26 July 2017)** @ Durham University, United Kingdom. For more information, please click [here](#).
- **International Society for Evolution, Medicine & Public Health (ISEMPH 2017) (18-21 August 2017)** @ University of Groningen, Groningen, the Netherlands. For more information, please click [here](#).
- **European Society of Evolutionary Biology congress (ESEB 2017) (20-25 August 2017)** @ University of Groningen, MartiniPlaza, Leonard Springerlaan 2, Groningen, the Netherlands. For more information, please click [here](#).
- **Wageningen Soil Conference 2017: Soil Science in a Changing World (27-31 August 2017)** @ Wageningen University & Research, Orion Building, Wageningen, the Netherlands. For more information, please click [here](#).
- **Fundamentals of Life in the Universe Symposium (31 August – 1 September 2017)** @ Energy Academy Building, Zernike Campus, Nijenborgh 6, Groningen, the Netherlands. For more information, please click [here](#).
- **IALE 2017 - European Landscape Ecology Congress (12-17 September 2017)** @ Ghent, Belgium. For more information, please click [here](#).
- **Heimans en Thijsse Symposium 'Bloemrijk of gifgroen? (23 September 2017)** @ de Leeuwenbergh (Servaasbolwerk 1a), Utrecht, the Netherlands. For more information, please click [here](#).
- **Joint Annual Meeting; Ecology Across Borders (11-14 December 2017)** @ Ghent, Belgium. For more information, please click [here](#).

---

## 2. Courses

- **The Art of Modelling (12-23 June 2017)**  
Modelling is a crucial part of today's science. Particularly in agronomy, ecology and environmental sciences, where models are used for assessing sensitivity of systems to disturbances or changes in external factors, and for predictions of future system states. This course provides an introduction to modelling. For more information, please click [here](#).
- **International Summer School: Evolutionary Biology (17-24 June 2017)**  
Summer school in Evolutionary Biology for master and PhD candidates. The main aim of the course is to develop the skills to produce an independent research project in evolutionary biology. For more information, please click [here](#).
- **Political Ecologies in/of the Anthropocene: value, life and critique (21-27 June 2017)**  
The summer school gives motivated PhD candidates the chance to deepen their knowledge on political ecologies in the Anthropocene. The course covers two broad and interrelated thematic areas of interest in contemporary political ecology: The emergence of the 'Anthropocene' and its competitors and The value of life in the Anthropocene. For more information, please click [here](#).
- **Animal Movement Analysis (2-7 July 2017)**  
The aim of this course is to provide participants with skills to assist them in working with animal movement data including data management and

organization, working with large tracking datasets, data exploration, visualization and analysis of movement data. For more information, please click [here](#).

- **Environmental Signalling in Plants (28-30 August 2017)**  
Our society depends on plants, not only as the primary source of food and dominating role in ecosystems, but also as provider of commodities such as pharmaceuticals and building materials. In many ways plants are essential contributors to human well-being and health. Experimental Plant Sciences study the fundamental life processes of plants at different organisational levels, from molecules & cells to whole plants and ecosystems. For more information, please click [here](#).
- **Human-induced land degradation (2-10 September 2017)**  
This course uses an interdisciplinary approach to learn about the different syndromes of soil degradation in different countries of the world and their consequences for people and the environment. Furthermore, solutions and sustainable management strategies are discussed. For more information, please click [here](#).
- **Quantitative Ecology (Module for Master students & PhD candidates) (October 2017 – January 2018)**  
The courses in this module are focused on both the ecological theory and the analysis and interpretation of ecological data using modern computational approaches (using CANOCO, R etc.). For more information, please click [here](#).
- **Linking Community and Ecosystem Dynamics (12-17 November 2017)**  
This course focuses on theoretical concepts such as autocatalytic loops and feedbacks between organisms, thermodynamics in species interactions and the importance of ecosystem engineers. We will explore how these principles can be used to link communities to ecosystems in order to understand how environmental change affects community and ecosystem dynamics. We will develop conceptual ideas, using examples from many terrestrial, marine and aquatic ecosystems. For more information, please click [here](#).
- **MOOC: Landscape Restoration for Sustainable Development: a Business Approach (Continuously open) @ Online.** For more information, please click [here](#).

---

### 3. Position Announcements

- For job openings, check [our website](#).

---

### 4. Other News

- **NWO Visitor's Travel Grants (Continuous application).** Researchers in the Netherlands can apply for a visitor's grant for highly qualified senior researchers from abroad who hold a PhD. With this grant these researchers can stay in the Netherlands for a maximum of four months. For more information and application click [here](#).

---

***If you have information that you would like to have included in the NERN messages or on the NERN website, please send this information to [Claudius.vandeVijver@wur.nl](mailto:Claudius.vandeVijver@wur.nl).***