

# PE&RC Messages

## January 2017

### HIGHLIGHTS

#### [Netherlands Annual Ecology Meeting](#) (14 - 15 February 2017)

This year will be the 10th edition of the Netherlands Annual Ecology Meeting (NAEM). As always, the meeting will be held at the conference centre "De Werelt" in Lunteren.

#### [Summer School: 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. Location: The Institute for Biodiversity and Ecosystem Dynamics (IBED) University of Amsterdam

### PE&RC Postgraduate courses

- [Dynamic models in R: Programming, parameter estimation and model selection](#) (10, 16, 17, 23, 24 March and 7 April 2017)  
*Ecological modelling, based on field data, has become an indispensable tool in ecological research. This course presents a conceptual framework for ecological modelling: covering elementary growth models and probability distributions needed to mathematically model processes. The course presents techniques for dynamic simulation, model fitting, parameter estimation, and model selection based on maximum likelihood and information theory. The course is taught with R as the programming language because it is freeware and it allows flexibility in handling and modelling data.*
- [Introduction to R for statistical analysis](#) (8 - 9 May 2017)  
*The aim of this course is to provide an introduction to R, a language and environment for statistical computing and graphics. Focus of the course will be on getting familiar with the R environment, to use R for manipulation and exploration of data, and to perform simple statistical analyses. Hands-on exercises will form a large part of the workshop. After introduction of a topic, participants can work through some exercises, familiarizing themselves with the ideas.*
- [Basic Statistics](#) (10, 11, 15, 16, 17 May 2017)  
*This is a refresher course (so it goes into category 2A of the PE&RC TSP). The level is that of a second course in Statistics. We will refresh basic knowledge of Probability, Statistical Inference (Estimation and Testing), t-tests, simple cases of Regression and ANOVA, Experimental Design, Non-parametric Tests, and Chi-square Tests. Some time is reserved to discuss statistical problems of the participants.*

- **Hands-on Global Soil Information Facilities 2017** (15 – 19 May 2017)

*The aim of this ISRIC course is to introduce various components of GSIF and provide hands-on training within the R environment for statistical computing.*

- **World Soils and their Assessment 2017** (15 – 19 May 2017)

*This is an ISRIC course on international standards for soils classification and assessment. It will provide an introduction to the soils of the world and their diversity, their main forming factors, classification (according to the World Reference Base for Soil Resources 2014), and management.*

- **Design of Experiments** (19 – 23 May 2017)

*The design and analysis of experiments, using plants, animals, or humans, are an important part of the scientific process. Proper design of an experiment, apart from its proper analysis and interpretation, is important to convince a researcher that your results are valid and that your conclusions are meaningful..*

- **Linear Models** (7 – 9 June 2017)

*In this module we continue with Regression, ANOVA, and ANCOVA, set in the general framework of Linear Models. We see this module as the central module, and advise all participants to partake as it forms the basis of other advanced modules such as "Generalized Linear Models" and "Mixed Linear Models". We look at topics like parameter estimation and interpretation, checking model assumptions, regression diagnostics, analysis of unbalanced designs and multiple comparisons. The main statistical software used in the course is R.*

- **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. Modelling concepts will be dealt with in detail, going through the basic steps to be taken.*

- **Generalized Linear Models** (26 – 27 June 2017)

*In this module we study how to analyse data that are not normally distributed. We look at fractions (logistic regression), counts (Poisson regression, log-linear models), ordinal data (threshold models), and overdispersion. We discuss (quasi-) maximum likelihood estimation and the deviance. In computer practicals participants can familiarize themselves with models and methods. The main statistical software used in this course is R.*

- **Agent-based modelling for resilience** (26 - 30 June 2017)

*Resilience of systems is a major research challenge for our world's future. The systems in which our societies operate have social, ecological and technical components that are ever more connected. Our ambitions for guiding these systems are growing. Agent-based modelling is one of the techniques for investigating the complex, often surprising behaviour of these systems, and their response to policy interventions.*

- **Mixed Linear Models** (29 – 30 June 2017)

*In this module we discuss how to analyse dependent data, that is, data for which the assumption of independence needed in Linear Models is violated. So: Do you have a nested experimental set-up? Like measurements on large plots, but also on smaller plots within the larger plots? Do you have repeated measurements? In this sort of situations it is not reasonable to use ordinary ANOVA or*

*regression to analyse your data. These methods are likely too optimistic, and you will get erroneous significant results. With mixed linear models a more appropriate model, allowing for dependence between observations, can be specified, which will lead to more reasonable conclusions. In this module, you will learn about these models (also about the formulation in matrix notation, covariance matrices included), about the way to fit them to your data using software, and about the output produced by the software. In computer sessions participants can practice fitting models of this type, and gain an understanding of the output created by the software. You are encouraged to bring along your own data if you have any. The main statistical software used in this course is R.*

## **PE&RC Discussion group meetings**

- For a complete overview of all PE&RC discussion groups, please click [here](#).

## **Career development, skills and competences and career development courses by Wageningen Graduate Schools**

- For a complete overview of all Wageningen Graduate Schools courses, please click [here](#).

## **Symposia, Lectures, Workshops, Seminars and other activities**

- [European Conference of Tropical Ecology](#) @ Vrije Universiteit Brussels, Belgium (6 - 10 February 2017)
- [3rd International Conference "Plant Nutrition, Growth & Environment Interactions"](#) @ Vienna, Austria (20 - 21 February 2017)
- [International Conference "Plant Molecular Physiology"](#) @ Vienna, Austria (23 - 24 February 2017)
- [Matrix Approaches to Health Demography](#) @ Max Planck Institute, Rostock, Germany (13 - 24 March 2017)
- [Course on Lighting in Greenhouses and Vertical Farms](#) @ Wageningen, the Netherlands (3 - 5 April 2017)
- [AGILE International Conference on Geographic Information Science](#) @ Wageningen, the Netherlands (9 - 12 May 2017)
- [International Summer School: Evolutionary Biology](#) @ Guarda, Switzerland (17 - 24 June 2017)
- [Conference Pedometrics 2017](#) @ Wageningen, the Netherlands (27 June - 1 July 2017)
- [International Conference: The Value of Life: Measurement, Stakes, Implications](#) @ Wageningen, the Netherlands (28 - 30 June 2017)
- [Quantative Ecology \(Module for Master students and PhD Candidates\)](#) @ Ceske Budejovice, Czech Republic (October 2017 - January 2018)

## **Position Announcements**

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

## **Others**

- [NWO Visitor's Travel Grants](#). The Academy Ecology Fund supports ecological fieldwork in the

Netherlands and abroad and ecological research abroad by young ecologists working in the Netherlands. Funding is intended primarily for fundamental research. Projects seeking a fundamental solution to practical problems are also eligible.

If you have information that you would like to have included in PE&RC messages, please send this information to [Claudius.vandeVijver@wur.nl](mailto:Claudius.vandeVijver@wur.nl) before the first of the month.

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