



## **Statistical modeling in R - course and coaching**

**Dr. Gundula Bartzke**  
Biostatistics, Hohenheim University, Stuttgart, Germany

**July 2<sup>nd</sup> – July 4<sup>th</sup>, 2019**

### **COURSE CONTENT:**

This course is meant for those who have little or no experience with the management of the statistical package "R". Basic knowledge of statistics is required to attend the course. After finishing the course you will be able to (i) manage and modify databases in R, (ii) perform basic descriptive statistics and (iii) conduct simple analyses such as regression and ANOVA. Mainly, the idea is to familiarize you with the software (including e.g. the possible failures and errors that occur) so that you can apply this knowledge to analyse your own datasets. Notice that this course is given by the biostatistics unit, which is part of the Institute of Crop Science. Thus, our focus is mainly on analyses relevant for agricultural/biological trials.

- basic handling and syntax of the software R
- creating, modifying and exporting basic plots
- statistical analysis using linear models (e.g. regression, ANOVA, mixed-effects models)
- understanding and modeling experimental designs (completely randomized design, randomized complete block design, split-plot-design, repeated measures)
- testing for model assumptions (e.g., normality of residuals, homoscedasticity) and adjusting for, e.g., heteroscedasticity by data transformation)

### **DETAILS ABOUT THE COURSE:**

The host, CREATES in NM-AIST, will provide free lunch, dinner and teas for all course days. In addition, shuttle transfer from your place of accommodation to the course site at NM-AIST will be provided.



## REGISTRATION FEES:

- Participants from NM-AIST are free of charge
- Participants from Tanzania shall pay 100 \$US
- Participants from the African region (outside of Tanzania) shall pay 150 \$US

Further, all participants are required to pay for their own travels and accommodation.

## HOW TO APPLY:

Please send an email to: [anna.treydte@nm-aist.ac.tz](mailto:anna.treydte@nm-aist.ac.tz), attaching an updated CV and a one-page letter of motivation why you think you should participate in this course and how it will help your current / future research activities.

Send these documents no later than **June 7<sup>th</sup>, 2019!**

## INSTRUCTOR:

### Dr. Gundula Bartzke

Since 2015: Biostatistics Unit, University of Hohenheim, Stuttgart, Germany. In 2014, she finished her PhD in biology at the Norwegian University of Science and Technology. She defended her Masters in Biodiversity and Conservation at the University of Leeds in 2008. Before that, Gundula received a Veterinary Degree at the Free University in Berlin in 2006. Her current research: buffalo population dynamics in the Mara ecosystem in Kenya. Gundula's expertise lies in wildlife conservation and ecology, statistical analysis and modelling, GIS and programming

