Link to this website: http://bit.ly/AnaVegR

Multivariate Analysis of Vegetation Data in R: Current Practice

Course provided on 25-26 July 2015 as a part of the *58th Annual Symposium of the International Association for Vegetation Science* held in Brno, Czech Republic

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Course overview

This course focuses on commonly used multivariate methods for analysis of vegetation data, mainly ordination and classification. We will demonstrate how to use these methods in R, how to read the R output and correctly interpret it, what are the common mistakes and how to avoid them. We will combine the brief theoretical parts, which will introduce the concept behind each method, with practical examples using real vegetation datasets and with individual work. Most of the course materials are available online (http://bit.ly/AnaDatR). We hope to make the atmosphere of the course relaxed and allocate enough time for questions and discussion.

Location

The course will take place in Bohunice University Campus (http://bit.ly/bohunice-university-campus), at the computer room A9/316, which is located above the central university library in the pavilion A9 (https://www.muni.cz/general/mu_quarters/complex_map/3?lang=en). Detail guide about how to get to the campus main entrance (bus stop *Univerzitni Kampus*) and how to get from the main entrance to the computer room can be downloaded here (the guide was prepared by Salza Palpurina and Victoria Vagner for their R course on Big data, which is being held a weekend before IAVS conference exactly at the same computer room). The direction from the main entrance of the campus to the computer room will be also marked by labels.

Schedule

The course will start on **Saturday, 25 July 2015, at 9:00** at the computer room A9/316, and end up on Sunday, 26 July 2015, around 17:00. Since the campus is a bit complicated to navigate (it's like an orbital station with many doors and alleys), **we all will meet on Saturday, 25 July, between 8:45 and 8:50 in front of the main entrance of the Campus** (red building, see photo at http://bit.ly/1grwtfk) and walk to the computer room together. If you come late, please follow the guide or signs on the walls of corridors to the computer room. During the weekend the campus is closed, but there is a non-stop guarding service at the main entrance, who will let you get in - but **please, don't forget to bring and wear your conference badge**.

Each day, the course will start at 9:00 and finish around 17:00. There will be four sections (90 minutes each), separated by two 30-minutes coffee breaks and one hour for lunch. During the coffee breaks, we will provide a simple refreshment – coffee, tea, water, juice and some cookies, available close to the computer room. Drinks will be served into recyclable cups – if you don't like this, we encourage you to bring your own cup or bottle. For lunch, you can visit either Academic Canteen, food court or restaurants in the surrounding (the map with their locations will be provided during the course). Please, note that except for the simple refreshment offered during the coffee breaks, other food (lunch etc.) should be paid out of your own pocket.

What to bring with you

Each participant will be provided with computer with the latest version of R-program and RStudio preinstalled and user account with password. It is recommended to bring your own flash-disc in case you want to store data and examples elaborated during the course.

If you want to use your own computer, feel free to bring your laptop. Make sure that your laptop has ability to connect to wifi and you have administration rights to install new software and R-libraries. Campus offers Eduroam wifi network - you will get temporary login credentials from us if you don't have your own.

Before the course, **please make sure that your computer has installed the latest version of R (version 3.2.1, installed from here) and RStudio (version 0.99.464, installed from here)**.

Preliminary programme

(the program is subject to changes according to current situation in the course)

Saturday 25 July 2015	
9:00-10:30	Introduction to R and RStudio, import of data, manipulation with data, installing libraries etc.
10:30-11:00	Coffee break
11:00-12:30	Unconstrained ordination I (DCA, PCA, NMDS), theory plus practical examples
12:30-13:30	Lunch *(go out of the campus to either canteen, food court or some of restaurants)*
13:30-15:00	Unconstrained ordination II, preparing ordination diagrams, projecting and testing supplementary variables
15:00-15:30	Coffee break
15:30-17:00	Constrained ordination I (RDA, CCA) – theory behind and practical examples
Overnight	Homework (optional)
Sunday 26 July 2015	
9:00-10:30	Constrained ordination II – forward selection, Monte Carlo permutation test, practical examples
10:30-11:00	Coffee break
11:00-12:30	Numerical classification (cluster analysis, TWINSPAN), interpretation and presentation of results, practical examples
12:30-13:30	Lunch *(go out of the campus to either canteen, food court or some of restaurants)*
13:30-15:00	Elaborated examples I
15:30-15:30	Coffee break
15:30-17:00	Elaborated examples II, conclusion of the course

List of registered participants (updated on 10-7-2015)

Surname	**Name**	**Country**
Bede-Fazekas	Ákos	Hungary
Borsukevych	Liubov	Ukraine
Couvreur	Jean-Marc	Belgium
Czarniecka	Marta	Poland
Forker	Melanie	Germany
Greulich	Sabine	France
Horvat	Vlatka	Spain
Janecková	Petra	Czech Republic
Jiménez-Alfaro	Borja	Czech Republic
Kącki	Zygmunt	Poland

Surname	Name	Country
Ladouceur	Emma	tn
Lepesi	Nikolett	Hungary
Lin	Huang	Czech Republic
Majeková	Maria	Czech Republic
Mayer	Roland	Austria
Noroozi	Jalil	Austria
Pielech	Remigiusz	Poland
Skowronek	Sandra	Germany
Swacha	Grzegorz	Poland
Terwei	Andre	Germany
Uogintas	Domas	Lithuania
Weekes	Lynda	Ireland

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