

# Nonlinear Regression with R

## Objective

Participants will learn how to model non-linear relationships with statistical tools.

## Description

The online course focuses on the following topics:

1. Modelling nonlinear functional relationships between one predictor variable and one response (univariate nonlinear regression)
2. Models with more than one predictor: multivariate nonlinear regression
3. Modelling periodic phenomena
4. Smoothing by fitting: LOESS, kernel smoothing methods, splines, generalized additive models

## Methodology

Interactive lecture with numerous small hands-on exercises using the RStudio programming environment.

## Conditions

- Basic familiarity with the R programming language is essential. In particular the following skills are required:
  - Using the R interpreter, either the command-line program or in R Studio <https://rstudio.com/>
  - How to invoke R functions, pass optional/named parameters
  - Some familiarity with simple plotting commands
- Basic statistics knowledge: mean, variance, correlation
- Familiarity with linear regression techniques is desirable. Participants who attended the “Linear Regression with R” course are encouraged to participate.

## Trainer



**Dr. András Aszódi**  
VBCF BioComp, Vienna

- He has extensive computational biology experience - both in academia and industry
- He is currently working at the Bioinformatics and Scientific Computing Core Facility at the Vienna Bio-center Campus
- His main tasks are the development of short courses on biostatistics and scientific programming

## Organizational Information

Language / Format	English / Online
Target group	Doctoral Candidates at all stages and Postdocs from all faculties
Date	Tuesday, 14 February 2023, 9:00 – 13:00
Registration	<a href="#">For registration click here</a>