

Price: 200 Euros (NOT including food or accommodation). Pay in cash at workshop.

Participants arrange accommodation by themselves.

ADMB Workshop

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This course targets quantitative ecologists, and students who need to handle nonlinear statistical models (both frequentist and Bayesian).

AD Model Builder (admb-project.org) is highly efficient, freely available software for implementing non-linear statistical models.

Day 1: General introduction to AD Model Builder

Day 2: Advanced topics in AD Model Builder

Participants work under supervision on models of their own choice

The main reasons for preferring AD Model Builder are:

Flexibility. The user is free to define any desired model, and not limited to choose between a set of predefined models.

Speed. Automatic differentiation can make the difference between waiting hours and seconds for a converging model fit.

Precision. Automatic differentiation calculates the derivatives as accurately as if the analytical derivatives were implemented.

Quantification of uncertainties. With almost no extra effort AD Model Builder produces several different estimates of the uncertainties of model parameters and selected derived quantities

This beginners' course in ADMB will include:

A brief overview of ADMB.

Install and set up the software.

ADMB syntax and a first example.

Definition of data, model parameters, and output.

Programming the likelihood function.

Estimation uncertainties (delta, profile, and MCMC methods).

Random effects models in AD Model Builder.

Spatial models

The actual contents of the course will be customized to fit the audience. The form will be a mixture between lectures and hands on exercises.

Participants will have to provide their own laptop computer.