Institut für Geographie

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Spezielle Methoden PG

Introduction to Climate Modeling

(Einführung in die Klimamodellierung)

Prof. Dr. Thomas Mölg

Studiengänge/Study program(s): BSc (Module PG 13/14)

ECTS: 5 (2 SWS)

Teilnehmerzahl/Participants: max. 20

Termin & Ort/Times & Location: siehe/see UNIVIS

Vorbesprechung/Pre-Meeting: keine/none

Course will be held in English if international students participate!

Models are increasingly important tools in many areas of science and in every-day life. Particular challenges arise if the system to be modeled is of dynamical, non-linear nature, which is the case for many biological and environmental processes. This course will target the principles of modeling, focusing on the climate system of Earth. We will begin with simple models and proceed successively to more complex structures, including local- to global-scale problems. A focus will be on model uncertainty, which enhances the value of models for analysis and prediction significantly. As the principles taught in this course have a universal character, the trained "thinking in models" will be applicable to a variety of questions that may also be outside of natural science. For participation in the course, knowledge of software with programming capabilities is an entry requirement (e.g., R, Matlab, IDL, …). Depending on the participants, the seminar will run in German or English.