Module name	**Advanced model evaluation**
Module number	CMS-TRK-EM4
Senior Lecturer	Prof. Dr. Andreas Hartmann andreas.hartmann@tu-dresden.de
Qualification objectives	Students master a variety of advanced methods to quantitatively assess simulation models in environmental sciences using different approaches to sensitivity and uncertainty analysis, can choose the right method according to requirements and questions, and can critically, objectively and application-relatedly evaluate the results of these methods.
Contents	The module includes advanced methods for sensitivity and uncertainty analysis and their exemplary application with simple to complex groundwater models.
Forms of teaching and learning	The module includes lectures of 2 SWS, exercises of 2 SWS, tutorials of 1 SWS and self-study. The teaching language of lectures, exercises and tutorials may be German or English and will be specifically determined by the teacher at the beginning of each semester and announced in the usual manner.
Eligibility for participation	The competences to be acquired in the module CMS-TRK- EM2 Hydrological modeling practice are assumed.
Usability	In the Masters Course Computational Modeling and Simulation, the module is an optional module in the Track Computational Environmental Science and Engineering, to be selected in accordance with Annex 2 to the Specific Examination Regulations. The module cannot be chosen in the Master's Course Computational Modeling and Simulation if this or a module with substantially the same content from a Course with which the entry conditions under § 3 of the Studienordnung have been met has already been completed. The module provides the pre-requisites for the modules it designates under the pre-requisites for participation.
Conditions for the award of credits	Credits are awarded when the module test is passed. The module test consists of a complex performance of 60 hours. The language of the exam is German.
Credits and marks	The module allows 5 credit points to be obtained. The module score corresponds to the test performance score.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module covers 1 semester.