Module name	**Modelling case studies**
Module number	CMS-TRK-MAMS
Senior Lecturer	Director of the Institute of Scientific Research Expect id.wir@tu-dresden.de
Qualification objectives	Students have a systematic understanding of how application problems can be mathematically formulated, appropriately simplified and treated numerically. They are also able to present their findings in a comprehensible way to non-mathematical professionals.
Contents	The content of the module is mathematical modelling and treatment of problems from non-mathematic applications, preferably by describing them through partial differential equations.
Forms of teaching and learning	The module includes seminars of 4 SWS, projects of 6 SWS and self-study. The language of the seminars and projects will be English.
Eligibility for participation	Skills for partial differential equations at bachelor's level are required.
Usability	In the Master's Course Computational Modeling and Simulation, the module is a compulsory module in the Track Computational Mathematics. 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 an unrated combined housework of 40 hours. The language of the exam will be German or English, at the student's choice.
Credits and marks	The module allows for the award of 10 credit points. The module test shall be marked as 'passed' or 'failed'.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 300 hours.
Duration of the module	The module covers 1 semester.