Module name	**Interactive Information Visualisation**
Module number	CMS-TRK-IIV
Senior Lecturer	Prof. Dr. Raimund Dachselt raimund.dachselt@tu-dresden.de
Qualification objectives	Students have ready-to-use knowledge of the application area of interactive information and data visualisation and master essential techniques and basic principles related to modern computer environments. They can assess existing information visualisation solutions and are able to select and develop appropriate visualisation and interaction techniques depending on tasks and users. Students can apply modern information visualisation techniques and implement various concrete interactive visualisation techniques according to the state of the art of research.
Contents	The content of the module includes advanced information visualisation techniques and key concepts of interactive visualisation of multivariate data, networks and hierarchies. It focuses on concepts for exploration and analysis of large data and information spaces, coordinated visualisation views, zoomable user interfaces, focus and context techniques, and magic lenses. Other content includes modern visualisation environments with very large and very small displays and their combination, mobile terminals, immersive mixed reality solutions and physical data representations.
Forms of teaching and learning	The module includes lectures of 2 SWS, exercises of 2 SWS and self-study. The language of the lectures and exercises will be English.
Eligibility for participation	The skills to be acquired in the CMS-COR-VIZ Data Visualisation module are assumed to be the basics of data visualisation. Knowledge of human-computer interaction at bachelor's level is also required. The following literature is suitable for preparation: 1. Interaction design: Beyond Human Computer Interaction, 6th Edition. Yvonne Rogers, Helen Sharp, Jennifer Preece. John Willey Sons, 2023. ISBN: 978-1-119-90109-9, 2. Human Computer Interaction, 3 rd edition. Alan Dix, Janet E. Finlay, Gregory D. Abowd, Russel Beale. Pearson Prentice Hall, 2002. ISBN: 978-0-13-046109-4.

Usability	In the Masters Course Computational Modeling and Simulation, the module is an optional module in Track Visual Computing, Track Computational Life Science and Track Computational Engineering. 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 90-minute away day. The language of the test will be English.
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 summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module covers 1 semester.