

Only the german version of the module description as part of the study regulations is legally binding.

Module name	Touch Sensing and Processing
Module number	INF-25-Ma-FVC-TSP
Responsible lecturer	Prof. Dr. Roberto Calandra roberto.calandra@tu-dresden.de
Qualification goals	Students acquire in-depth knowledge of touch sensing and touch processing techniques. They can independently implement these techniques algorithmically. They can apply these algorithms in practice, on specific touch-sensing hardware and to concrete problems, and are able to empirically and quantitatively investigate the algorithms in relation to their application.
Contents	The module covers the fundamentals of the psychology of touch, touch-sensing hardware, simulation of touch, touch sensing, touch processing, touch-based control, and applications of touch sensing, touch processing, and touch-based control.
Teaching and learning methods	The module includes lectures totaling 2 semester hours per week, exercises totaling 2 semester hours per week, and self-study. The language of instruction for lectures and exercises is English.
Requirements for participation	No prior knowledge is required.
Applicability	In the Diploma program in Computer Science, this module is an elective module in the field of Visual Computing and Machine Learning, which must be selected according to Appendix 2 of the examination regulations. In the Master's program in Computer Science, this module is an elective module in the Open Track within the field of Visual Computing and Machine Learning, as well as in the supplementary module, which must be selected according to Appendix 2 of the examination regulations. This module can only be chosen once in the Master's program in Computer Science. This module cannot be chosen in the Master's program in Computer Science if this module, or a substantially equivalent module from a degree program that fulfills the admission requirements according to § 3 of the study regulations, has already been completed. This module fulfills the prerequisites for the modules listed under "Prerequisites for Participation."
Requirements for earning credit points	Credit points are awarded upon successful completion of the module examination. The module examination consists of a portfolio assessment totaling 10 hours. The examination language is English.
Credit points and grades	This module is worth 6 credit points. The module grade corresponds to the grade for the examination.
Frequency of the module	The module is offered every winter semester.

Workload	The total workload is 180 hours.
Module duration	The module comprises 1 semester.