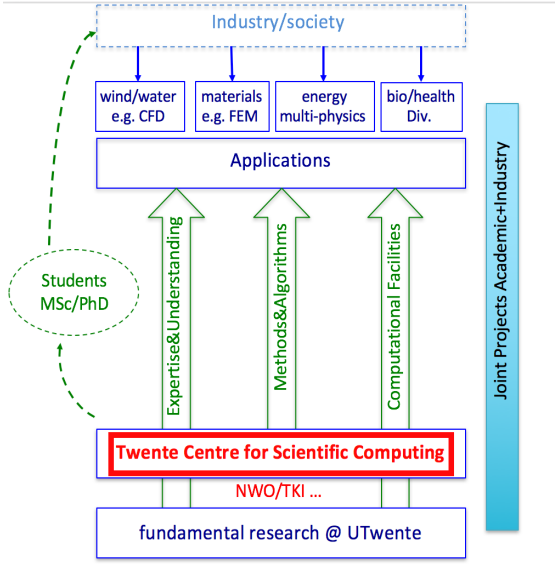
Twente Centre for Scientific Computing (TCSC.eu)

What is TCSC?



The Twente Centre for Scientific Computing (TCSC.eu) is an umbrella for all people interested in this interesting field, across all the faculties of the University of Twente. Research groups from the faculties of Engineering Technology (ET), Electrical Engineering, Mathematics and Computer Science (EWI), Science & Technology (TNW), Behavioural, Management & Social Sciences (BMS), as well as Geo-Information Science and Earth Observation (ITC), all work on Scientific Computing and collaborate within TCSC and outside, worldwide showing one of the strengths of the UTwente. The TCSC comprises >20 chairs/groups supervising over 150 PhDs students that perform research related to computing, modelling, numerics, etc., with countless applications in science and engineering. The main research themes of TCSC are aligned with the spearheads of the research institutes of the UT, involving for example nano-technology (MESA+), bio-medical technology (TECHMED), information and communication technology (DSI) or engineering and industrial applications. TCSC is a collaboration- and communication-partner for profit and non-profit organizations, connecting the UTwente with the world.

From research to application

TCSC can bring together the demands of industry/society with the research at the UTwente, taking its natural position in developing and translating fundamental research at the University of Twente to innovations for engineering and technology. Scientific Computing plays a key role in solving problems in industry and understanding complex dynamics and emerging structures found in high-tech solid and fluid systems, bio-medical systems, or in nature — often complementing and sometimes preceding physical experiments. In addition, Scientific Computing plays a crucial role in technology development, for example, facilitating novel designs and optimising unit-operations (apparatus) and processes, saving resources and energy. It is a research field that evolves on contributions from basic disciplines in Mathematics, Physics, Informatics, Chemistry, Geo-sciences, and Engineering.

Training, Seminars and Education

The multidisciplinary nature of TCSC is reflected in its Computational Science Lecture-Series, running since 2012, hosting many high-profile research-leaders from UT and all over the world. TCSC develops and supports the Twente Graduate School (TGS) Program CSE (Computational Science & Engineering). This high-level training program for graduates is based on the solid foundation of several MSc educational programs fostered within the UTwente. The members of TCSC are contributing their experience to several nationwide research schools (JMBC, EM, DISC), where one goal of TCSC is that the key expertise for Scientific Computing is being taught in a coordinated way and is made available to industry.

Website: www.tcsc.eu **Contact**: Prof. Dr. Stefan Luding – s.luding@utwente.nl