39th Conference of Rectors and Presidents of European Universities of Technology

Online conference hosted by University of Technology of Compiègne, France
September 17th-18th, 2021

"Universities of Technology addressing the challenges that planet earth is facing"

Welcome and introduction to the conference

Manfred Horvat

Coordinator of the Conference

I am delighted to be here at UTC welcoming you at the 39th crp. It has been a long journey preparing the conference this time. Due to the Covid-19 pandemic, our UTC host had to prepare the conference twice – although the conference was fully arranged for September 2020 as face-to-face event with all speakers confirmed and participants registered the conference had to be cancelled and postponed two weeks before its start because of Covid-19. The conference needed to be re-launched in 2021, and finally the decision had to be taken to switch to the online mode.

I want to wholeheartedly thank our colleagues at UTC for their tireless commitment and effort - President Christophe Guy and his predecessor Philippe Courtier as well as Director Cornelia Marin of the international Office and her staff members Gaelle Dacqmine, Gabriele de St. Denis and Anne Buvron. Last but not least, I would like to thank also the IT professionals at UTC who are arranging the online platform for our event. In fact, it is the second time that our conference is hosted by UTC. In 1992, the topic was "New approaches to engineering education and research".

My sincere thanks go to the keynote speakers and the university speakers for staying on board our joining us this year. The speakers are the key actors for making the conference a success.

The grand challenges have been addressed by crp before already, 2009 at the Danish Technical University in Lyngby, and 2014 at Chalmers University of Technology in Gothenburg. However, the Covid-19 pandemic has been and is a call for immediate action, and it is a dramatic emergency call also for putting more emphasis on addressing the other global challenges related to health, climate, aging, food, energy, cities, migration and security. Covid-19 dramatically showed the globality and multiple dimensions of the challenges.

Universities - and universities of technology in particular - have important roles to play and bear a high level of responsibility addressing the global challenges and finding appropriate and sustainable solutions that meet societal acceptability and environmental criteria.

Addressing the challenges requires new approaches in education and research and substantial changes, regarding institutional strategies and structures, contents of teaching and learning as well as delivery and adoption modes as well as facilitating measures, new research arrangements, team work, interdisciplinarity and transdisciplinarity, as well as inter-institutional cooperation and communication with non-academic circles including the general public. In all facets of those scenarios of change re-considering and breaking our habits and attitudes are required.

We need to address fundamental philosophical questions about the very nature of technologies as results of human and social activities with important impact on our planet – activities involving taking decisions between possible alternative solutions which includes taking account of values, ethics and responsibility.

How to educate comprehensive researchers and engineers that are capable of designing technologies while considering their scientific, technological, functional, and economic as well as social and environmental dimensions – which requires a T-shaped qualification profile where the vertical bar represents the deep rooting in one discipline and the horizontal bar the knowledge and understanding, capability and skills necessary for taking a systems point of view and communicating across disciplinary and sectoral boundaries. Considering the multi-dimensional nature of sustainable development and the grand challenges made universities of technology take up the tasks of integrating social sciences and humanities (SSH) by reforming curricula and adapting the modes of education and research as well as their institutional setup.

Universities are reconsidering their strategies, the organisational structures and the framework conditions facilitating interdisciplinary cooperation as well as transdisciplinary communication with non-academic circles.

Universities have been aware of the structural challenges presented by interdisciplinarity for a long time. A 1982 OECD Report on "The University and the Community" shows that by a chapter heading "The community has problems and the university has departments".

Of course, the challenges go far beyond structural adaptations but include substantially changed processes and procedures of communication, coordination, cooperation and co-creation – and not to forget: open science and open data.

The programme of our conference has been designed to cover important aspects of these issues, and we are very grateful to our speakers for their important contributions.

In the first part of the conference, eminent speakers will provide overviews and insights regarding the challenges our planet is facing and their different dimensions and as well as approaches to address them at EU and other levels.

In the second part, eight representatives of universities of technology from different parts of Europe will present institutional strategies, structures as well as initiatives and programmes addressing the challenges. That spectrum of different approaches provides opportunities for immediate discussion and exchange as well as for mutual learning and future cooperation.

The conference will be concluded by an outlook to the 40th crp at TU Wien – Vienna University of Technology – on September 23rd-24th, 2021.

After the conference, all presentations will be made available on the conference website http://www.crp-eut.org supporting post-conference contacts and communication.

The online format is certainly a challenge and we certainly hope that we will be able to use the platform and the special IT supported provisions prepared by UTC also for informal interaction and achieving best possible results under the present circumstances. Again: special thanks to UTC for all the excellent preparations also in that respect.