



International Online Workshop: Particle Technology and Product Design Education – A Digital Leap Forward

10-11 May 2021 (European afternoon)

Why a workshop on teaching particle technology and product design?

An IFPRI-sponsored workshop in April 2017 showed the need for greater coordination of the particle science and technology community regarding education in the field. In particular, colleagues from industry highlighted the general lack of key competences of new graduates in particle-related topics, while lecturers demanded that relevant aspects of particle technology and product design are integrated to a greater extent in core engineering subjects. Moreover, there is a considerable need for the focus to widen from traditional particle technology unit operations to include product design for multiphase systems for a wide range of applications. Four years on from the previous workshop and following a year of emergency online teaching, we stand on the cusp of possible great changes to the way engineering competences are delivered to students. It is therefore pertinent to take new stock of the global situation of particle technology and product design education, to highlight best practices, particularly that of blended learning and optimize key components of the curriculum for future needs.

The Erlangen-based **Collaborative Research Centre 1411 “Design of Particulate Products”** (www.crc1411.research.fau.eu) and the **International Fine Particle Research Institute (IFPRI)** (www.ifpri.net) cordially invite you to attend the two-day International Workshop on Particle Technology and Product design Education - A Digital Leap Forward.

Day 1: 10 May 2021 2.30 - 6pm (CEST) Focus: Curriculum

The first day of the workshop will concentrate on the status of the particle technology and product design curriculum. Plenary talks given by university lecturers from different countries and representatives of industry will trigger discussion of the core curriculum, new developments and challenges.

Day 2: 11 May 2021 1.45 – 6pm (CEST) Focus: Blended learning and digital methods

Blended learning aims to combine the advantages of asynchronous learning with the necessary synchronous interactions between students, their peers and their teachers. Although universities have engaged themselves for many years with online and blended learning methods, uptake has varied considerably across the subject spectrum. In the fields of chemical engineering in general and particle science and engineering in particular, blended learning has not been widely implemented. The coronavirus pandemic has thrust digital-oriented teaching into the spotlight and may provide the catalyst for a sea-change in the approach to higher education in the engineering sciences. Nevertheless, the wide range of opportunities, challenges and solutions associated with blended learning brings the risk that traditional face-to-face teaching is replaced by a variety of disparate approaches at different institutions or even within them. This could result in a confusing situation, not only for students themselves but also for lecturers and for future employers who wish to identify the most suitably trained candidates. Consequently, networking between university educators in the relevant fields is more critical than ever. After nearly a year of “emergency online teaching”, it is important for our field of particle science and engineering to take stock, highlight best practices, identify shortcomings and chart out a sustainable course for the future. To this end day two of the workshop will comprise a combination of presentations covering relevant elements of blended learning for engineering teaching with a discussions on the World Café model where colleagues can share their own (recent) experiences.

While participation at the workshop is **free of charge**, registration is mandatory in order to receive access to the video conference and discussion board. Further information (schedule, speakers and abstracts) and the online registration form is available on the workshop website: www.crc1411.research.fau.eu/pt-education-workshop2021/