

TUT 2: Tutorial des Fachverbands Didaktik der Physik (joint session DD/TUT)

Physics teaching at universities can be significantly enriched by moving beyond traditional lecture formats and embracing interactive, learner-centered approaches that foster deep and sustainable understanding. Drawing on successful practices from universities in Germany and abroad, this workshop highlights how insights from learning psychology and proven teaching innovations can be translated into effective physics education. It invites participants to explore how evidence-based, interactive methods can transform learning experiences and support lasting learning outcomes in everyday teaching practice.

Time: Sunday 16:00–18:15

Location: BEY/0137

Tutorial TUT 2.1 Sun 16:00 BEY/0137

Rethinking University Teaching: Creating interactive and sustainable learning environments in lectures — •SUSANNE HEINICKE¹, CHRISTIAN KAUTZ², PETER RIEGLER³, CLAUDIA SCHÄFLE⁴, SILKE STANZEL⁴, and MICOL ALEMANI⁵ — ¹Institute for Physics Education, University of Muenster — ²Hamburg University of Technology — ³Ostfalia University of Applied Sciences — ⁴Technische Hochschule Rosenheim — ⁵University of Potsdam

The workshop bridges current findings from learning psychology with

experience and research findings on practical teaching formats to enhance effective learning in university physics education. We will give an overview of key principles from educational psychology concerning how we learn to provide a foundation for understanding learning effectiveness. Participants will explore and critically reflect on evidence-based interactive methods like peer instruction, interactive formats, and problem-based learning that can be transferred to their own teaching. The workshop concludes with a discussion on implementation strategies and evaluation approaches to support sustainable integration into everyday teaching practice.