

ANTRITTSVORLESUNG

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Univ. Prof. Dr. Lana Ivanjek obtained her PhD in Atomic and Molecular Physics at the University of Zagreb with the thesis *An investigation of conceptual understanding of atomic spectra among university students*. After completing a postdoctoral stay at the University of Vienna and a junior professorship at TU Dresden, she eventually became a professor of Physics Education at JKU Linz. Ms. Ivanjek collaborated for years with the Physics Education Research Group at the University of Washington, Seattle, USA, undertaking several research stays in USA and delivering lectures at numerous international conferences. Her research interests include e-learning and modern media in physics education, the development and validation of conceptual instruments, research on critical thinking in physics, as well as the development and evaluation of research-based physics teaching materials for both school and university level.

Mittwoch, 26. Juni 2024, 16.00 Uhr
Uni-Center, 2. Stock, Loft C

Innovative (university) teaching – example from Physics Education Research

Instruction in introductory physics courses has traditionally been very instructor centered. The same is true for high school physics. Most physics teachers make a great effort to transmit their knowledge and enthusiasm hoping that their students will learn the important concepts and develop the interest for physics. However, the years of the research in physics education show that this is not the case. Most of the students leave the high school and university physics courses without developing functional understanding of the subject or in other words without the ability to do the reasoning needed to apply physics concepts to new situations. Besides examining student understanding and getting the insights to their reasoning, physics education research community has been developing the research-based teaching materials both for high school and university physics courses. Two examples of such research-based materials together with accompanying research will be presented.