



PHYSIKALISCHES KOLLOQUIUM

Vortrag: **Jun.-Prof. Dr. Lana Ivanjek**
Faculty of Physics,
TU Dresden



Thema: **Teaching and learning physics during the COVID-19 pandemic:
different lesson formats and implications for the future**
(Antrittsvorlesung)

Zeit und Ort: Dienstag, 8.6.2021, 16:40 Uhr, Online-Meeting: ZOOM
[https://tu-
dresden.zoom.us/j/84875677160?pwd=aFpxR2JJQ1djbXhERm96R0tiS3hnQT09](https://tu-dresden.zoom.us/j/84875677160?pwd=aFpxR2JJQ1djbXhERm96R0tiS3hnQT09)
Meeting-ID: 848 7567 7160 // Kenncode: 8veVC9\$n

Leitung: Dekan der Fakultät Physik Prof. Dr. Carsten Timm

Kurzfassung: In March 2020 COVID-19 pandemic has caused sudden shift to e-learning at schools and universities worldwide. Most of these institutions were not prepared for this shift and were not offering online classes beforehand. A group of physics education researchers from Croatia, Austria and Germany has started a joint project to evaluate teaching and learning processes during COVID-19 pandemic in the context of physics courses at the university level. As a part of the research 18 semi-structured interviews were conducted with 16 physics students and 2 engineering students from University of Vienna, Austria, University of Zagreb, Croatia, TU Dresden, University of Göttingen und TU Kaiserslautern, Germany and the questionnaire with 246 technical data fields divided into 13 subtopics was administered to 578 students from same universities. The questionnaire topics included general information about tools used for e-learning, demographic data, self-organization skills (general and during COVID-19 semester), environment, attitudes to synchronous and asynchronous teaching, helpfulness of different course activities, attitudes toward online learning, communication, expected learning achievement in the physics courses and implication for the future courses. Three additional subtopics concerned different course formats like tutorials, physics labs, labs for future physics teachers and school practice. In this talk the whole research project will be presented with the emphasis on student's perception on synchronous and asynchronous physics lessons, their self-organization skills, activities and teaching methods they perceived as helpful and on the implications for the future physics courses.



Im Anschluss an das Kolloquium sind Studierende und Mitarbeitende eingeladen zu einem **Get-Together mit Lana Ivanjek**, um mit der Referentin persönlich ins Gespräch zu kommen und sich über weibliche Perspektiven auf Herausforderungen in Studium und Berufsleben auszutauschen. Die Veranstaltung beginnt 18:15 auf Zoom: <https://cern.zoom.us/j/69003151442?pwd=ajFoQ1ZKVzQya0p1MElvM2E0Q1Y0UT09>

Biographie:

Lana Ivanjek is from October 2020 Junior Professor in the field of physics education research at TU Dresden. Her current research interests are modern media in teaching and learning physics, development and validation of research-based teaching materials for introductory physics courses at university level and for high school and development and validation of concept inventories for middle-school, high school and university level. She graduated at University of Zagreb, Croatia with dissertation: An investigation of conceptual understanding of atomic spectra among university students. Before coming to Dresden, she was postdoc and senior lecturer at University of Vienna, Austria.