

Teaching introductory physics in the 21st century: advancements and challenges

Gorazd Planinšič

Faculty for Mathematics and Physics, University of Ljubljana, Slovenia

Apstrakt. The changes in the labor market, largely caused by advancements in science and technology are shaping the future jobs and consequently the future. The modern society expects us to prepare future generations who not only have basic knowledge of physics but also learn how to think like scientists. At the same time, we obtained a great deal of evidence through last decades that to learn anything people need to be active participants in the learning process, not passive observers. This evidence comes from studying how human brain works and how people learn as well as from numerous studies that focus on specific subjects such as physics. As a result, several teaching/learning approaches have been developed during the last decade that try to achieve the goals described above. How can a teacher or educator evaluate these approaches and how to choose the best one? In my talk, I will address some key criteria that will help teachers evaluate different approaches and give examples of good practice.