

Important aspects for a junior experimental scientist

Dr. Hongyi Xiao

Institute for Multiscale Simulation, University of Erlangen-Nuremberg

Starting a scientific career as an experimentalist is often exciting but sometimes frustrating, as barriers for a transition from learning to creating knowledge and technologies are seldom mentioned in education curriculum. In this presentation, I will address the challenges in such a transition and discuss important aspects of conducting experimental research as a junior scientist. This covers evaluating research ideas, transforming research goals to testable hypotheses, identifying key measurable, etc. Accumulating knowledge and skills is also important, and effective methods will be identified beyond classroom-type learning. The presentation will serve as the first lecture in a series aiming to help young experimental scientists, with the rest of the lectures focusing more on executing experimental plans, evaluating results, and developing more specialized skills.

