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Numerical Challenges & Limitations of Longitudinal Beam Dynamics

Monday, 23 February 2015 16:00 (1 hour)

This lecture will go through different numerical approximations and resulting limitations used frequently in longitudinal beam dynamics simulations. Computational challenges of multi-bunch simulations with intensity effects will be addressed in detail.

Targeted audience: Computer scientists, engineers, and physicists interested in accelerator physics

Benefits of attending the lecture: By the end of the lecture, you will have an overview of the main limitations and challenges faced in longitudinal beam dynamics simulations of synchrotrons.

Prerequisites: Basics in beam dynamics and/or having followed Lecture 1

Presenter: TIMKO, Helga (CERN)

Session Classification: Simulation of Longitudinal Beam Dynamics Problems