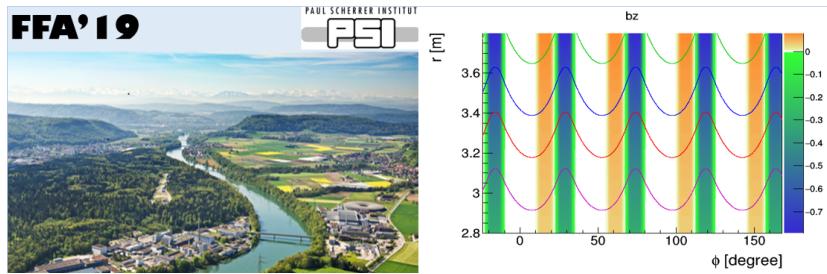


# International Workshop on Fixed Field alternating gradient Accelerators (FFA'19)



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## An Update on OPAL

Thursday 21 November 2019 09:45 (45 minutes)

After a general introduction of OPAL, I will introduce a set of new features available with version 2.0 [1]. All new features will be presented together with examples of ongoing research projects. In the OPAL-cyc flavour, a robust way of generating matched distributions with linear space charge is introduced. A new method for describing fixed field accelerators (FFAs) in a very general way will be shown. A new element TRIMCOIL can be used to correct for field-errors in cyclotrons and FFAs [2]. The OPAL was extended to allow the specification of multi objective optimisation problems, which are then solved with a built in NGSA-II genetic algorithm. A new feature SAMPLER allows you to setup and run random or sequential parameter studies and seamless utilisation of a vast number of computing cores. Future plans such as the new AMR-Solver for precise neighbouring bunch simulations will be presented.

**Author:** ADELMANN, Andreas (Paul Scherrer Institut)

**Presenter:** ADELMANN, Andreas (Paul Scherrer Institut)

**Session Classification:** Computer codes