Contribution ID: **53** Type: **Invited Talk**

Optimization at the GSI/FAIR accelerator facility

Monday, February 5, 2024 1:30 PM (30 minutes)

The complexity of the GSI/FAIR accelerator facility demands a high level of automation in order to maximize time for physics experiments. This talk will give an overview of different optimization problems at GSI, from transfer lines to synchrotrons to the fragment separator. Starting with a summary of previous successful automation, the talk will focus on the latest developments in recent months, such as the optimization of multi-turn injection in the SIS18 synchrotron. The introduction of a Python bridge to the settings management system LSA and the integration of GeOFF (Generic Optimization Framework & Frontend) enabled and facilitated beam-based optimization with numerical algorithms and machine learning. Geoff is an open-source framework that harmonizes access to a number automation techniques and simplifies the transition towards and between them.

Possible contributed talk

Yes

Are you a student?

No

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Session Classification: Invited Talks