

## Beam-Based Feedback for the European XFEL

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Pump-probe and seeding experiments at free-electron laser facilities such as the European XFEL are highly dependent on precise regulation of bunch arrival time and bunch compression. Combined RF field and beam-based measurement and feedback allow to fulfill these requirements. This contribution shows the beam-based feedback implementation for XFEL and current achievements and limitations at FLASH. Furthermore, the large amount of accelerating modules within the FEL main linac requires a beam energy management. An outline of slow and fast beam energy feedbacks, which will further improve the beam performance, is given.

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