

## **FAST DISTRIBUTION OF PULSES IN MULTIPLE BEAM LINE FACILITIES**

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### *Abstract*

Superconducting drive linacs for FEL facilities offer long rf-pulses which can accelerate thousands of electron bunches. Individual bunches are distributed to several beam lines for quasi-simultaneous operation of different user stations. We will present various schemes that fulfill this task and take the fast beam distribution of the European XFEL as an example for design choices. The main challenge is the preservation of the excellent electron beam quality, transversely and longitudinally, which leads to demanding hardware requirements to ensure beam stability and advanced electron optics to prevent emittance degradation due to self-fields.

**CONTRIBUTION NOT  
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