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Type: Invited Oral Presentation

## Advances in beam physics and technology for ultrafast electron diffraction

*Monday 11 August 2025 11:30 (30 minutes)*

Ultrafast electron diffraction (UED) is a rapidly advancing field, with a surge of scientific outcomes and significant progress in the development of high-brightness electron beams tailored for improved resolution and signal-to-noise ratios. In this talk, we will present recent developments in beam physics and technology aimed at producing beams with lower emittance, shorter bunch lengths, tighter timing synchronization, and better stability for UED, as well as for broader applications that demand high-brightness, precisely controlled beams.

### Please consider my poster for contributed oral presentation

No

### Would you like to submit this poster in student poster session on Sunday (August 10th)

No

### Footnotes

### Funding Agency

### I have read and accept the Privacy Policy Statement

Yes

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