



Contribution ID: 122

Type: **Oral**

Practical Coherent Diffractive Imaging (CDI) - I

Monday, 6 October 2025 09:15 (1h 20m)

This tutorial provides a hands-on introduction to Fourier Transform Holography (FTH) and Coherent Diffractive Imaging (CDI), with a focus on practical implementation at synchrotron facilities. Aimed at both new and experienced users, the session will cover the fundamentals of lensless imaging, including experimental setup considerations, data acquisition strategies, and reconstruction workflows. Participants will gain insight into the comparative strengths of FTH and CDI, when and how to use each technique, and how to troubleshoot common challenges encountered during beamtime—such as coherence constraints, reference design, and detection limitations. Real and simulated datasets will be used to demonstrate key steps in phase retrieval and image analysis. By the end of the session, attendees will be equipped with the knowledge to plan and analyze FTH/CDI experiments, and to critically assess the quality and limitations of their reconstructions. No prior experience with CDI is required, though familiarity with basic diffraction and synchrotron instrumentation is assumed.

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Session Classification: Tutorials + coffee break