

## Application for the student session

**Presentation title:**

Coherent optical vortex generation based on seeded free electron lasers

**Abstract:**

In this presentation, we will give a brief introduction about some features and applications of the optical vortex firstly. And then we will present some feasible methods to generate optical vortex based on seeded free electron laser including high-gain harmonic generation (HG) and echo-enabled harmonic-generation (EEHG). Finally, we will show some experimental design and arrangement to generate optical vortex based on Shanghai Soft X-ray Free-Electron Laser user facility (SXFEL-UF).

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