

## Application for the student session

**Presentation title:**

Single-shot measurement of the beam transverse space space

**Abstract:**

The phase space of a electron beam is one of the most important perspectives to describe the beam clearly. Although, there are 6 dimensions of the phase space, which are 2D longitudinal phase space (LPS) and 4D transverse phase space (TPS), and measuring the 6D phase space would reveal all information about the beam needed to improve the performance and control of the beam, measurement and prediction only of the longitudinal phase space were well studied by researchers in the past several years. When non-linear forces are considered, more accurated diagnostics of the TPS are essential to optimize the beam behavior in many setups, such as UED and FEL.

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