Optimizing charge transport simulation for hybrid pixel detectors

SEMINAIRE

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The charge-integrating MÖNCH hybrid pixel detector, with a 25 µm pitch, enables machine learning-based position reconstruction for electrons and X-ray photons with enhanced spatial resolution. Accurate simulations are crucial for generating high-quality training data, necessitating optimization of conventional approaches. In this work, we optimize charge transport simulations by incorporating charge repulsion effects and obtain significant improvements in consistency between simulations and measurements.

About the speaker : Xiangyu Xie is a postdoctoral researcher in the Detector Group at the Paul Scherrer Institute's Center for Photon Science since 2022. His work focuses on enhancing the spatial resolution of the MÖNCH detector using machine learning. His research spans simulation developments, calibration methods, and detector characterization.

Ce séminaire sera suivi d'une pause café

Formalités d'entrée : accès libre dans l'amphi du pavillon d'Accueil.
Si la manifestation a lieu dans le Grand Amphi SOLEIL du Bâtiment Central merci de vous munir d'une piece d'identité (à échanger à l'accueil contre un badge d'accès).

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