



UNIVERSITY
OF OSLO

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Cover letter for student grant at the 2025 EAAC

Dear committee,

My name is Daniel Kalvik and I am a PhD student under the supervision of Dr. Carl Andreas Lindstrøm at the university of Oslo, Norway. I am part of the SPARTA project, which has as a goal to build a plasma-wakefield driven particle accelerator. The purpose of this accelerator is both to do higher energy strong-field QED experiments compared to what has been accomplished, and to work as a stepping stone towards a PWFA based particle collider.

My work is focusing on experimental verification of transverse instabilities in plasmas as well as mitigation methods for said instabilities. To do so I am currently partaking in experiments at the SLAC national accelerator lab, while at the same time analyzing important data taken by my supervisor at the FLASHForward facility at DESY. I am also working on designing a driver distribution system which is crucial to the realization of electron-driven plasma-based acceleration, and is what I will be presenting at the conference.

Designing a big facility requires technological innovation and collaboration across multiple fields. The EAAC is therefore a prime place for me to network with other brilliant people, and to get insight on the latest innovations and progress within the field. I have also never attended an international conference, and I am therefore very excited about the chance to learn more about the wider field of advanced acceleration, to meet new peers and start building an international network of collaborators.

Sincerely,

Daniel Kalvik

A handwritten signature in black ink, reading "Carl A. Lindstrøm".

Carl Andreas Lindstrøm