

The logo for the Center for Integrated Plasma Studies (CIPS) is displayed in a stylized, serif font within a dark rectangular box.

Center for Integrated
Plasma Studies

SEMINAR

An Experimental University Research Program in Plasma Wakefield Acceleration

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SLAC National Accelerator Laboratory

The interaction of lasers, plasmas, and particle beams presents a fascinating and vast parameter space for exploration, innovation, and discovery that is rich with complex dynamics occurring over time scales and energy densities spanning many orders of magnitude. This line of research is interdisciplinary by nature, so it provides an excellent opportunity for shared knowledge and resources with other research groups at the university. It also tends to attract students due to the active hands-on nature of the experiments and the interesting potential future applications. These days, a laser-driven plasma wakefield accelerator system can easily fit within the lab space and budget of a university research program while performing cutting-edge research and exploring the fundamental physics of the highly non-linear beam-plasma interactions. In this talk I will outline an experimental research program that is centered around such a laser-beam-plasma system in the university lab, supplemented with collaborative research projects that would be conducted at one or more larger accelerator facilities around the world.

Friday, February 26th @ 10am

CIPS Stern Conference Room, Gamow Tower F931

Refreshments 9:45 Room F935