



Prof. Spencer Gessner - SLAC National Laboratory

Plasma Based Accelerators for Ultra High Energy Colliders

Recent experiments at SLAC demonstrated beam-driven plasma acceleration with accelerating gradients in excess of 150 GeV/m. That's nearly 10,000 times the accelerating gradient produced by RF cavities in the SLAC linac. Wakefield accelerators are a promising technology for future high energy colliders and were identified by the P5 Panel as a path toward 10 TeV collisions. The US 10 TeV Wakefield Collider Design Study is currently being formed in response to P5's recommendation. In this talk, I'll discuss challenges and R&D opportunities for a 10 TeV Wakefield Collider, and highlight opportunities for engagement with HEP theorists and experimentalists. I will also explain how the 10 TeV Wakefield Collider Design Study fits into the broader future collider strategy, and how research towards a 10 TeV Wakefield Collider benefits near-term Higgs Factories.



Tuesday, December 10 2024 at 11 am (PST)

Room: Knudsen 3-171, Zoom: <https://cornell.zoom.us/j/373862927>, Passcode CBB