

Session Program

26-31 Jul 2026



Advanced Accelerator Concepts 2026

A1-Working Group # 1

Luskin Conference Center, UCLA

Monday 27 July

13:30

A1-Working Group # 1

Session | Location: Luskin, Ballroom A&B

13:30-13:50

Next-Generation High-Repetition-Rate Lasers for Laser-Plasma Accelerators and Secondary Sources

Speaker

Kaikai Zhang

13:50-14:10

Coherent Beam Stacking Enabled Compact, Energy Scalable, and Several Optical Cycle Capable Ultrashort Pulse Post-Compression for the Next-Generation LWFA Drivers

Speaker

Tayari Coleman

14:10-14:30

Design and progress of a 150 mJ, 40 fs, 5 kHz fiber-laser accelerator driver

Speaker

Tong Zhou

14:30-14:50

Ultrashort Pulse Generation and High Power Machine Protection in a Fiber Laser for Advanced Accelerator Applications

Speaker

Mahek Logantha

14:50-15:10

100mJ Spatially and Temporally Combined Femtosecond Fiber Laser System Enabling Next Generation Laser Plasma Accelerators

Speaker

Christopher Pasquale

15:10-15:30

Update on the LWIR Laser Capability at ATF

Speaker

Mikhail Polyanskiy

15:30

16:00

A1-Working Group # 1

Session | Location: Luskin, Ballroom A&B

16:00-16:20

High-repetition-rate, all-reflective optical guiding and electron acceleration in helium using an off-axis axicon

Speaker

Jiří Šišma

16:20-16:40

Revealing Laser and Electron Beam Evolution in 10-GeV-class Laser-Plasma Accelerators

Speaker

Alex Picksley

16:40-17:00

Tunable, monoenergetic electron bunches with a π -step injector in optically guided laser wakefield acceleration

Speaker

Jaron Shrock

17:00-17:20

Dephasing Mitigation of Multi-GeV Electron Beams in a Ramped Plasma Waveguide

Speaker

Ela Rockafellow

17:20-17:40

Effects of laser-plasma waveguide coupling on accelerated electron bunch stability and spatial profiles

Speaker

Ari Sloss

17:40-18:00

Kilohertz Guiding and Laser Wakefield Acceleration in Optically Generated Plasma Channels

Speaker

Gabriel Brewster

18:00

Tuesday 28 July

13:30

A1-Working Group # 1
 Session | Location: Luskin, Ballroom A&B

13:30-13:50

Effects of Controlled Laser Wavefront Aberrations on Charge Trapping, Electron Beams, and Betatron X-rays in Petawatt Laser Wakefield Acceleration

Speaker
Tanner Nutting

13:50-14:10

Self-loading LWFA using two-color ionization injection with flying-focus lasers

Speaker
Evan Trommer

14:10-14:30

Controlled Electron Injection in LWFA using a Segmented Capillary Gas-Cell

Speaker
Inhyuk Nam

14:30-14:50

High Quality Electron Beams for Staging at BELLA PW

Speaker
Aodhan McIlvenny

14:50-15:10

EuPRAXIA@ELI: Phase-1 and Phase-2 (X)FEL

Speaker
Bernhard Hidding

15:10-15:30

Path to High-Quality, High-Charge LWFA Beams for Light-source and Collider Applications

Speaker
Lance Labun

15:30

16:00

A1-Working Group # 1
 Session | Location: Luskin, Ballroom A&B

16:00-16:20

Dephasingless laser wakefield acceleration in a plasma waveguide

Speaker
John Palastro

16:20-16:40

CHEQUP: an open-source hydrodynamics framework for plasma-channel formation

Speaker
Christian McCombs

16:40-17:00

Hydrodynamic optical-field-ionized channel optimizations for beam brightness in a practical laser wakefield accelerator model

Speaker

Christopher Doss

17:00-17:20

Scaling laws for guided and unguided laser-plasma accelerators at fixed laser energy and wavelength

Speaker

Carlo Benedetti

17:20-17:40

Optimizing Laser Parameters For Blowout Regime: From Petawatt NIR to LWIR Wakefield Drivers

Speaker

Navid Vafaei-Najafabadi

17:40-18:00

PIConGPU - coupling HPC and AI for laser plasma simulations

Speaker

Michael Bussmann

18:00

Thursday 30 July

13:30

A1-Working Group # 1

Session | Location: Luskin, Ballroom A&B

13:30-13:50

Experimental Demonstration of Laser Wakefield Acceleration Driven by Laser Pulse Carrying Orbital Angular Momentum

Speaker

Qian Qian

13:50-14:10

Nonlinear propagation of spatiotemporal optical vortex pulses

Speaker

Abram Konzel

14:10-14:30

Ultrafast Angular Momentum Transfer in Tunnel-Ionized Plasmas

Speaker

Chen-Kang Huang

14:30-14:50

Plasma-based Powerful, Radially-polarized, Narrowband THz for Compact Electron Accelerators

Speaker

MinSup Hur

14:50-15:10

Investigation of transverse instability in efficient plasma-based accelerators

Speaker

Arohi Jain

15:10-15:30

Gas-phase diffractive optics for high-power beam control

Speaker

Ke Ou

15:30