Session Program

10–15 Aug 2025

NAPAC25 - North American Particle Accelerator Conference 2025

TUP: Tuesday Poster Session

SAFE Credit Union Convention Center
1401 K St, Sacramento, CA 95814

Tuesday 12 August

16:00

TUP: Tuesday Poster Session

Poster Session | **Location:** SAFE Credit Union Convention Center, 1401 K St, Sacramento, CA 95814

A higher momemtum aperture lattice proposed for the sPHENIX background problem

Speaker
Chuyu Liu

Measurements of the beam longitudinal properties in the Fermilab Linac

Speaker
Ralitsa Sharankova

Lattice refinements for nonlinear integrable optics in IOTA

Speaker
John Wieland

Design update on the transition beamline for the CEBAF Energy Upgrade

Speaker
Bamunuvita Gamage

A GPU-parallelized Weak-Strong Beam-Beam Simulation Code in Julia Programming Language

Speaker
Yi-Kai Kan

HIGH DC INJECTION VOLTAGE PHOTOCATHODE E-BEAM SOURCES

Speaker
Brian Beaudoin

A multi-harmonic cavity system for bunch lengthening for the NSLS-II upgrade

Speaker
Gabriele Bassi

A Beam Chopping Scheme Concept for the New LAMP MEBT

Speaker
Dr Salvador Sosa Guitron

2D Phase Space Tomography with SciBmad Tracking

Single-Bunch Instabilities Driven by Space Charge During Low-Energy Cooling at Injection in the EIC Hadron Storage Ring

Speaker
Alexei Blednykh

LANSCE Beam Transport Model Enhancement and Validation

Speaker
Clara-Marie Alvinerie

Vertical Emittance Growth from IBS Diffusion via Beam-Beam Coupling in the EIC

Speaker
Derong Xu

Lattice design for pre-cooling in EIC HSR-IR2

Speaker
Derong Xu

Beam-Beam Fields with Full Six-Dimensional Coupling: Theory and Computational Methods

Speaker
Yi-Kai Kan

Capture efficiency optimization in a compact distributed drive linac

Speaker
Michael Kaemingk

Overview of FCC-ee beam-beam studies

Speaker
Peter Kicsiny

Design of flat-to-vortex beam adapter with strong space charge

Speaker
Brian Beaudoin

Explicit symplectic representations of nonlinear dipole fringe field maps

Speaker
Chad Mitchell

Linac to BAR/RCS transfer line design for EIC electron injection system

Speaker
Bamunuvita Gamage

Multi-objective optimization of strong hadron cooler Energy Recovery Linac injector

Speaker
Ningdong Wang

Rapidly pulsed synchrotron acceleration chain for a Fermilab sited muon collider

Speaker
Kyle Capobianco-Hogan

Selection of Ion Sources for Modernization of the LANSCE Front End

Speaker
Leanne Duffy

Simulation Study of Particle Loss in Synchrotron Phase Space Injection for ESR Using Weak-Strong Beam-Beam Simulation with Nonlinear Lattice

Speaker
Yi-Kai Kan

Dynamic Aperture Studies at the Fermilab Recycler Ring

Speaker
Cristhian Gonzalez-Ortiz

Status of Conceptual Horizontal Splitter Design for FFA@CEBAF Energy Upgrade

Speaker
Ryan Bodenstein

Timing of Ultrafast Electron and Laser Pulses with Narrowband Thz Interferometry for Ultrafast Electron Diffraction

Speaker
Stephen Weathersby

Towards Differentiable Beam Dynamics Modeling in BLAST/ImpactX

Speaker
Axel Huebl

Extracting symplectic maps for space charge dominated beams

Speaker
Nikhil Bachhawat

JuTrack, a Julia-based auto-differentiable accelerator simulation code for advanced dynamics, scientific machine learning and optimization

Speaker
Jinyu Wan

Optimizing 4D emittance measurements using the pinhole scan technique

Speaker
Peter Owusu

Recent optimization results of nonlinear beam dynamics for complex bend lattice

Speaker
Minghao Song

IOTA Experiment for Proton Pulse Compression at Extreme Space-Charge

Speaker
Benjamin Simons

The implementation of adaptive step size Runge Kutta integrator in Zgoubi

Speaker
Jonathan Lee

Estimation of the Wakefield Resonant Frequency Using Different Simulation Tools

Speaker
Muhammed Unutmaz

Simulations of CSR and LSC induced microbunching in the presence of a laser heater

Speaker
Sergei Kladov

Development of a Density Functional Theory Approach for Calculating Electronic Band Structure Parameters in Support of Monte Carlo Simulations of Photoemission

Speaker
Joniel Mendez

Commissioning of a fusion collider for interstellar propulsion

Speaker
Gerald Jackson

Emittance mismatching of electron swap-out injection for the Electron Storage Ring of the Electron-Ion Collider

Speaker
Yun Luo

Instability Threshold Measurements in the IOTA Ring at Fermilab

Speaker
Mary Duncan

Extreme focusing of high-energy beams using near-field coherent transition radiation

Speaker
Douglas Storey

Beam-Beam Limitation Toward 10^34 cm^−2 s^−1 Luminosity for Electron-Ion Collider

Speaker
Derong Xu

Mu2e Resonant Extraction Regulation System Simulation in Delivery Ring

Speaker
Aakaash Narayanan

Interactions between the circulating beam and the injection foil at the Proton Storage Ring of LANSCE

Speakers
En-Chuan Huang, Joshua Yoskowitz

Electromagnetic space-charge fields in a cylindrical cavity with a small aperture: analytical and numerical analysis

Speaker
Chong Shik Park

Matching the Beam from AGS to the EIC Hadron Storage Ring with Excellent Emittance Preservation

Speaker
Anbang Jiang

A Community Effort toward a Particle Accelerator Lattice Standard (PALS)

Speaker
Chad Mitchell

Progress Toward Dual-Pulse Operation at the Proton Storage Ring of LANSCE

Speakers
En-Chuan Huang, Mr Heny Patel

Implementation of Adjoint Sensitivity Analysis in WARP

Speaker
Dan Abell

Beam Halo Formation with Different Cathode Distributions

Speaker
Isurumali Neththikumara

Generation of electron beam current spike for short pulse generation with two lasers

Speaker
Tianzhe Xu

Start-to-end simulation study for transverse wiggler-based manipulation experiment

Speaker
Gwanghui Ha

Preliminary experimental analysis of CSR shielding effects in a chicane compressor

Speaker
Gwanghui Ha

Current Status of the electron transport line from RCS to ESR: RTE line

Speaker
Isurumali Neththikumara

Benchmarking COMSOL and OPAL at Crocker Nuclear Lab

Speaker
SHUCHENG PAI

Impedance and Wakefield Studies of the EIC RCS 591 MHz Five-Cell Cavity

Speaker
Isurumali Neththikumara

Update of the EIC HSR injection system design

Speaker
Chuyu Liu

New Measurement Techniques for Gear-Changing Research Using DESIREE

Speaker
Edith Nissen

Beam tilt characterization using passive streaking structures

Speaker
Tianzhe Xu

Dynamic Aperture Correction for Ring Electron Cooler

Speaker
Jonathan Unger

Optical properties of wigglers with high field-to-energy ratio

Speaker
Sergei Seletskiy

The 10 TeV Wakefield Collider Design Study

Speaker
Jens Osterhoff

Laser Control of Electron Beams for Future Colliders

Speaker
Spencer Gessner

Transverse beam dynamics studies in the FRIB accelerating cryomodules

Speaker
Alec Gonzalez

Start-to-end simulations of nanometer-emittance beam transport through an emittance exchange beamline

Speaker
Buse Naz Temizel Ozdemir

Measurement and simulations of intrabeam scattering effects at NSLS-II

Speaker
Aamna Khan

Calculating the Resistive Wall Heating for the Vacuum Components in the Electron-Ion Collider with GdfidL

Speaker
Gang Wang

Tolerances of RF phase and voltage noises with beam-beam interaction in the Electron-Ion Collider

Speaker
Yun Luo

Aspects of stroboscopic averaging for the invariant spin field

Speaker
Eiad Hamwi

Accelerator physics design requirements and challenges of RF based electron cooler for EIC injection energy

Speaker
Alexei Fedotov

Phase variation for snake matching in the EIC's HSR

Speaker
Eiad Hamwi

Generation of low-emittance bunches with selective collimation at the Argonne Wakefield Accelerator

Speaker
Emily Frame

Beam-based measurement of LCLS-II injector solenoid misalignments

Speaker
Ahmed Osman

Space Charge Studies on Strong Hadron Cooler Energy Recovery Linac

Speaker
Isurumali Neththikumara

Construction of approximate invariants for non-integrable Hamiltonian systems

Speaker
Yongjun Li

Online regularization of Poincare map of storage rings with Shannon Entropy

Speaker
Yongjun Li

Optics Reconstruction in the SCL section of the FNAL Linac

Speaker
Abhishek Pathak

Mitigation of Coherent Synchrotron Radiation by Bunch Profile Optimization and Shielding

Speaker
Omkar Ramachandran

Fast differentiable simulations via dynamic multi-framework compilation

Speaker
Nikita Kuklev

Analysis of the elliptic integrable non-linear system in IOTA using tracking of a single electron.

Speaker
Aleksandr Romanov

Third Integer Resonant Extraction Transit Time Simulation Studies

Speaker
Aakaash Narayanan

Fast spin tracking using a Magnus expansion

Speaker
Eiad Hamwi

Plasma Waves in Accelerators

Speaker
Hannah McCright

Simulations of passive higher-harmonic RF cavities for bunch lengthening in ELEGANT and SPACE

Speaker
Aamna Khan

Efficient phase space density construction via transfer operators

Speaker
Vincent Tembo

Evolution of Realistic Beam Distributions in Space-Charge-Dominated Electron Beams

Speaker
Shiyi Wang

Minimizing dispersion through resonant extraction for BNL's NSRL

Speaker
Eiad Hamwi

CST Simulation and RF Power Calculations for 805 MHz SC LANSCE Equivalent Cavity

Speaker
Jesus Valladares

Simulations of LAMP Front-End Concept with Multiple Beams

Speaker
Dr Salvador Sosa Guitron

Exploring Space Charge Mitigation with Eigenpainting in the SNS

Speaker
Nicholas Evans

A Self-Consistent Simulation Study of Halo Formation in the PIP-II Linac Driven by Nonlinear Space Charge and RF Field Effects

Speaker
Abhishek Pathak

Failure of the superconducting circuit during RHIC Run 23

Speaker
Frederic Micolon

Impact of electron beam size ripple on proton emittance growth for EIC

Speaker
Derong Xu

Enhancing Reciprocal Space Resolution in MeV Ultrafast Electron Diffraction with Permanent Magnet Lenses

Speaker
Cameron Duncan

Electro-mechanical oscillations and instabilities in PIP-II SSR2 and LB650 cavities.

Speaker
Alexander Sukhanov

Multiple Interaction Points in Ghost collisions

Speaker
Bamunuvita Gamage

Recent Progresses Regarding Enclosed RF Cavities for Future Muon Collider Cooling Channel

Speaker
Dillon Merenich

Preliminary study of space charge and beam-beam interplay in a collider ring

Speaker
Helena Alamprese

Conceptual Design of the EIC Electron Storage Ring Beam Abort Systems

Speaker
Minwoong Oh

An extended Froissart-Stora formula for changing crossing speed

Speaker
Eiad Hamwi

Derivation of the conditions under which Boussard's criterion for the microwave instability may apply

Speaker
Ryan Lindberg

Odin klystron modulator for high power applications

Speaker
Christopher Yeckel

BeamNetUS Pilot Year Report: Enabling access to beam test facilities

Speaker
Emma Snively

18:00