

## **Session Program**

**19-24 May 2024**



## **IPAC'24 - 15th International Particle Accelerator Conference**

### ***Thursday Poster Session***

Music City Center  
201 Rep. John Lewis Way S, Nashville, TN 37203, USA

## Thursday 23 May

16:00

### Thursday Poster Session: THPC

**Poster Session** | **Location:** MCC Exhibit Hall A, Country

#### Test of parallel beam-based alignment at NSLS-II

**Speaker**

Minghao Song

#### FFA@CEBAF beam transport error and tolerance simulation studies

**Speaker**

Donish Khan

#### Sorting strategies for the new superconducting magnets for the CERN HL-LHC

**Speaker**

Thomas Pognat

#### Linear optics correction of an asymmetric storage ring lattice

**Speaker**

Xu Wu

#### Tail population studies in the CERN Proton Synchrotron

**Speaker**

Tirsi Prebibaj

#### Preparations of the Elettra booster for Elettra 2.0

**Speaker**

Stefano Krecic

#### Exploratory splitter bend system designs for FFA@CEBAF

**Speaker**

Donish Khan

#### Experimental measurements for extracting nonlinear invariants

**Speaker**

John Wieland

#### Broadband impedance induced heating proxy for operation at higher total current at SIRIUS

**Speaker**

Murilo Alves

#### Beam-based alignment of magnetic system in AREAL linear accelerator

**Speaker**

Dr Armen Grigoryan

#### IMPACT-T simulation for the latest coherent electron cooling pop experiment

**Speaker**

Kai Shih

**Design of the H- beamline for the LANL RFQ test stand****Speaker**

Dr Salvador Sosa Guitron

**Study of the beam-beam interaction in an electron-positron collider with large Piwinski angle and crabbed waist****Speaker**

Sangya Li

**Quasi-isochronous conditions and high order terms of momentum compaction factor at the compact storage ring****Speaker**

Matthias Fuchs

**Emittance growth studies due to Crab Cavity induced amplitude noise in the SPS****Speaker**

Andrea Fornara

**Transmission characteristics of dark current in UED****Speaker**

Jiapeng Li

**EIC impedance and beam dynamics****Speaker**

Alexei Blednykh

**Advanced modeling and optimization of nuclear physics colliders****Speaker**

Ji Qiang

**Correction of nonlinear lattice with closed orbit modulation****Speaker**

Xiaobiao Huang

**Impedance reduction of the beam gas ionization monitors for the CERN SPS****Speaker**

Hikmet Bursali

**Simulation of the LANSCE PSR injection and extraction beamlines****Speaker**

Dr Salvador Sosa

**Image based reconstruction of the Danilov-Nagaitsev integrable potential****Speaker**

John Wieland

**Design of the low-emittance complex bend lattice****Speaker**

Minghao Song

**Impedance analysis of the septum in Hefei Advanced Light Facility****Speaker**

Dr Wenbin Song

**Optimizations for ultrafast electron diffraction with a cryogenic C-band gun****Speaker**

Chad Pennington

**Resonant matching section for CEBAF energy upgrade****Speaker**

Bamunuvita Gamage

**Status of the Spallation Neutron Source beam test facility and progress of beam dynamics studies****Speaker**

Kiersten Ruisard

**Experimental measurement of the second-order transit time factor in a single-cell RF cavity for relativistic electron beams****Speaker**

Kai Shih

**Direct measurements of RHIC BPM data at the IP using linear regression****Speaker**

William Fung

**Comparison of simulation and measurement of an in-vacuum undulator coupling impedance at NSLS-II****Speaker**

Aamna Khan

**Beam trajectory influence on dispersion and uniform beams at NASA Space Radiation Laboratory's beamline****Speaker**

Weijian Lin

**Crossing transition in the EIC HSR with a resonance island jump scheme****Speaker**

Kirsten Drees

**Machine-assisted discovery of integrable symplectic mappings****Speaker**

Timofey Zolkin

**Impedance database for the Diamond-II booster****Speaker**

Richard Fielder

**Start-to-end simulations of the LAMP accelerator front-end****Speaker**

Dr Salvador Sosa

**SOLEIL II booster robustness and emittance exchange****Speaker**

Patrick Schreiber

**Beam based measurements of titanium coated ceramic chambers at NSLS-II**

**Speaker**  
Aamna Khan

### **Mini-beta optics commissioning at the European Synchrotron Radiation Facility Extremely Brilliant Source**

**Speaker**  
Nicola Carmignani

### **Space charge dominated momentum spread and compensation strategies in the post-linac section of Proton Improvement Plan-II at Fermilab**

**Speaker**  
Abhishek Pathak

### **Status of the ALBA-II lattice studies**

**Speaker**  
Michele Carlà

### **A wireless method for beam coupling impedance bench measurement of resonant structures**

**Speaker**  
Chiara Antuono

### **Assessment of the real part of the impedance of the LHC collimators with instability growth rate measurements**

**Speaker**  
Lorenzo Giacomel

### **Dynamics study of laser stripping injection of H- beam in the SNS**

**Speaker**  
Fanglei Lin

### **Use of two- and three-dimensional magnetic measurement data to refine the APS upgrade model**

**Speaker**  
Michael Borland

### **Updated analysis of beam halo measurements in LHC Run 2 and Run 3**

**Speaker**  
Milica Rakic

### **Optics corrections and performance improvements in the Bessy II Booster**

**Speaker**  
Meghan McAteer

### **Studies and mitigation of TMCI in FCC-ee**

**Speaker**  
Chiara Antuono

### **Impedance calculation for the hadron storage ring in the Electron-Ion Collider with ECHO3D**

**Speaker**  
Gang Wang

### **Full-cycle simulations of the Fermilab booster**

**Speaker**

Jean-Francois Ostiguy

**Status of beam-beam studies for the high-luminosity LHC****Speaker**

Ilias Efthymiopoulos

**Simulation of beam loading compensation with RF-Track****Speaker**

Javier Olivares Herrador

**Estimates of cross-talk effects for magnets of the Advanced Photon Source upgrade lattice****Speaker**

Michael Borland

**Beam-cavity interaction in the CERN PS 80 MHz RF systems****Speaker**

Mathieu Taquet

**Mitigation of beam coupling impedance for the wire scanners in the CERN Super Proton Synchrotron****Speaker**

Christine Vollinger

**Sextupole offset effects on the storage ring linear optics****Speaker**

Jinhyuk Choi

**Generation femtosecond proton beam for laser plasma acceleration****Speaker**

Ji Qiang

**Development of an ERL for coherent electron cooling at the Electron-Ion Collider****Speaker**

Sadiq Setiniyaz

**Interplay of space charge, emittance, and angular momentum in a flat-to-round transformer****Speaker**

Liam Pocher

**Adjoint computation of lattice sensitivities using particle simulation codes****Speaker**

Tom Antonsen

**Discussion of space charge effects of a beam train containing infinitely many bunches****Speaker**

Boyuan Feng

**Measured dynamic aperture and detuning of nonlinear integrable optics**

**Speaker**

John Wieland

**Bunch-by-bunch simulations of beam-beam driven particle losses in the LHC****Speaker**

Philippe Belanger

**Estimation of impedances and corresponding instabilities in Korea-4th generation storage ring****Speaker**

Jimin Seok

**Recent updates in the impedance characterization of the CERN PS Booster Finemet RF system****Speaker**

Christine Vollinger

**Impedance computation for large accelerator structures using a domain decomposition method****Speaker**

Herbert De Gersem

**GSI electron lens for space charge compensation****Speaker**

Markus Kirk

**Narrowband impedance studies in the HEPS storage ring****Speaker**

Jintao Li

**Proton beam dynamics in bare IOTA with intense space-charge****Speaker**

Nilanjan Banerjee

**Simulation of the simple feedback system for the mitigation of the cavity RF noise effects in EIC HSR****Speaker**

Vasiliy Morozov

**Investigation of transverse narrow-band impedance by coupled-bunch instability measurement in circular accelerator****Speaker**

Yudong Liu

**Combined wakefield and beam-beam effects in the EIC design****Speaker**

Ji Qiang

**Impedance model for the Fermilab Recycler ring****Speaker**

Mary Duncan

**Study of flat-to-round-to-flat transformation at high space charge**

**Speaker**

Patrick O'Shea

**Optics design of a compact helium synchrotron for advanced cancer therapy****Speaker**

Tirsi Prebibaj

**Minimizing space charge tune spread and increasing beam quality parameters with circular modes****Speaker**

Onur Gilanliogullari

**Validation of the slice model in beam-beam simulations****Speaker**

Yi-Kai Kan

**Horizontal splitter design for FFA@CEBAF energy upgrade: current status****Speaker**

Ryan Bodenstein

**Impact of insertion devices on SSRF-U lattice****Speaker**

Liyuan Tan

**Performance improvement studies of the fixed target beams along the CERN injector chain****Speaker**

Tirsi Prebibaj

**Pulsed correctors for the beam vertical stability during injection in CESR****Speaker**

Vardan Khachatryan

**Simulation of longitudinal phase space measurements for the RUEDI ultrafast electron diffraction beamline****Speaker**

Julian McKenzie

**Updates to the impedance database for the Diamond-II storage ring****Speaker**

Richard Fielder

18:00

16:00

**Thursday Poster Session: THPG****Poster Session** | **Location:** MCC Exhibit Hall A, Bluegrass**Updates to Xopt for online accelerator optimization and control****Speaker**

Ryan Roussel

**Equipment protection system against unexpected abnormalities during high-intensity proton beam operation at J-PARC MR****Speaker**

Masahito Yoshii



**Radiation levels from a beam gas curtain instrument at the LHC at CERN****Speaker**

Daniel Prelipcean

**Development of a second-generation system for the reliable distribution of machine protection parameters****Speaker**

Samuel Bolton

**Investigation for the applicability of a Hall probe measurement in B-field control for synchrotron duty cycle optimization****Speaker**

Thomas Margreiter

**Improved beam loss accounting with fast data acquisition (DAQ) chassis****Speaker**

Jayendrika Tiskumara

**Implementation of EPU56 control system at the Taiwan Photon Source****Speaker**

Jin-Kun Liao

**FPGA design of FRIB chopper monitor system****Speaker**

ZhiYong Li

**Integration of LHC-type beam loss monitors into the machine protection system for the SIS100 synchrotron at FAIR****Speaker**

Karim Laihem

**Research on Monte Carlo model of radiation source in HLS storage ring****Speaker**

Shaoxiang Dong

**Machine learning for the LCLS-II injector online modeling and optimization****Speaker**

Zihan Zhu

**A Kick-and-Cancel injection scheme for Diamond-II****Speaker**

Richard Fielder

**Performance optimization design of photocathode injector based on multi-objective genetic algorithm****Speaker**

Zheng Sun

**Cost-effective asset management for accelerator control systems: design and implementation for the ALS-U controls system****Speaker**

Jeong Han Lee

**Radiation levels in the LHC tunnel and impact on electronics during the 2023 Pb ion run****Speaker**

Samuel Niang

**Time-of-flight beam loss monitor for the Advanced Photon Source Upgrade booster-to-storage-ring transport line****Speaker**

Jeffrey Dooling

**Coupling of codes for modeling high-energy-density conditions in fourth generation light sources****Speaker**

Austin Dick

**FRIB target thermal image processing for accurate temperature mapping****Speaker**

Douglas McNanney

**Improvements of longitudinal stability with LLRF optimization at SIRIUS****Speaker**

David Daminelli

**Testing aspects of the CERN beam interlock system prior to installation in the accelerator****Speaker**

Antoine Colinet

**3D visualization and analysis of neutron scattering data in the control room****Speaker**

David Bruhwiler

**Development progress of high-level applications for the HEPS****Speaker**

Xiaohan Lu

**Automation upgrade of the CXLS photoinjector****Speaker**

Taryn Brown

**Long range plasma experiment beam transport with UCLA MITHRA beam line****Speaker**

Dr Monika Yadav

**Assessment of the ratios of radiation sources and total electron loss at the injection section of the Taiwan Photon Source facility and total electron loss by using neutron measurements****Speaker**

Yu-Chi Lin

**The LCLS-II beam loss monitor readout system****Speaker**

John Dusatko

### **The high-level software of the beam position limits detector system for the Advanced Photon Source upgrade storage ring**

**Speaker**

Hairong Shang

### **Commissioning of the digital LLRF system at the KEK Photon Factory 2.5 GeV ring**

**Speaker**

Daichi Naito

### **Status of the development of the new digital LLRF for ALBA synchrotron light facility**

**Speaker**

Juan Fernández

### **Accelerator control system software at LANSCE: vision and strategy for improvement and modernization**

**Speaker**

Eric Westbrook

### **First studies on error mitigation by interaction point fast feedback systems for FCC-ee**

**Speaker**

Frank Zimmermann

### **Status of the transverse bunch-by-bunch feedback system at APS-U storage ring**

**Speaker**

Weixing Cheng

### **Reducing background/noise in stretched wire alignment technique measurements**

**Speaker**

Michael Bates

### **BPM feedback for LLRF energy and phase regulation in charge stripping beamlines**

**Speaker**

Scott Cogan

### **Autofocusing accelerator beams**

**Speaker**

Alexander Katrusiak

### **HPSim simulation of the highly bunched WNR beam at LANSCE**

**Speaker**

En-Chuan Huang

### **High-reliability and high-performance machine protection system for a demanding electron linac**

**Speaker**

Rok Hrovatin

### **Continuous position estimation for the full remote alignment system of the High Luminosity LHC upgrade**

**Speaker**

Juergen Gutekunst

**An online analysis platform to facilitate analysis at X-ray light source****Speaker**

Nathan Cook

**Control system of injection and extraction for synchrotron-based proton therapy facility****Speaker**

Jin Tong

**The pre-alignment strategy of Hefei Advanced Light Facility storage ring magnet unit****Speaker**

Wei Wang

**Generation of symmetrical optical caustic beams for precise alignment****Speaker**

Martin Dusek

**CXLS ionizing and laser radiation safety interlock systems****Speaker**

Eric Everett

**Experimental results on longitudinal RF beam phase feedback in the heavy-ion synchrotron SIS18****Speaker**

Dieter Lens

**Development of RF reference distribution system for Hefei Advanced Light Facility****Speaker**

Shaoxiang Dong

**A multi-variable approach to mid-ranging control for unified operation of fast and slow correctors in fast orbit feedback system****Speaker**

Pavana Kallakuri

**Canadian Light Source developments of the ALBA/CLS DLLRF system****Speaker**

Denis Beauregard

**Prototype design of a digital low-level RF system for S-band deflectors****Speaker**

Jinfu Zhu

**Lifetime studies of magnet protection systems for the Large Hadron Collider at CERN****Speaker**

Dr David Carrillo

**The online radiation monitoring system for Hefei Advanced Light Facility**

**Speaker**

Shaoxiang Dong

**Prototype control system for the Low Energy Branch ion beamline****Speaker**

Matevz Skobe

**An approachable beam loss monitor configuration and operation tool for FRIB****Speaker**

Douglas McNanney

**ALS-U accelerator motion design and realization****Speaker**

Joseph Ricks

**Evaluation of top-up injection by a single nonlinear kicker in Taiwan Photon Source****Speaker**

Hao-Wen Luo

**Updating the RF system model in beam-cavity interactions under heavy beam loading effects****Speaker**

Yubing Shen

**Design, manufacturing and validation of the CLIQ units for the protection of superconducting magnets for the High-Luminosity LHC project at CERN****Speaker**

Dr David Carrillo

**TPS booster power supply performance experiment and monitoring program****Speaker**

Wei-Yu Lin

**Temporal profile shaping for a dispersive section using a multi-objective genetic algorithm****Speaker**

Zheng Sun

**Novel clock and trigger solutions with ultra-high precision delay to support time-resolved experiments at TPS****Speaker**

Jin-Kun Liao

**An accumulator ring lattice design for swap-out injection scheme****Speaker**

Yujie Lu

**Parallel quadrupole modulation for fast beam-based determination of magnet centers****Speaker**

Xiaobiao Huang

**Improvement of the LHC orbit feedback testing framework**

**Speaker**  
Andrea Calia

### **AGS Booster model calibration and digital-twin development**

**Speaker**  
Weijian Lin

### **ALS-U AR RF equipment protection system**

**Speaker**  
Najm Us Saqib

### **Machine protection system for TEX facility**

**Speaker**  
Giulia Latini

### **Summary of the operation of CSNS accelerator since its official opening in past five years**

**Speaker**  
Yue Yuan

### **The preliminary design and fabrication of LLRF system in proton CT**

**Speaker**  
Chengcheng Xiao

### **Design, manufacturing and validation of the new quench heater discharge power supplies for the protection of superconducting magnets for the High-Luminosity LHC Project at CERN**

**Speaker**  
Dr David Carrillo

### **RF and multipactor analysis for the CARIE RF photoinjector with a photocathode insert**

**Speaker**  
Haoran Xu

### **Design and commissioning of a high-level control system for a medical isochronous cyclotron**

**Speaker**  
Jean-Michel Bruneau

### **EPICS communication structure based on a SoC FPGA board**

**Speaker**  
ChongYue Li

### **Upgrade of LLRF control system for infrared free-electron laser**

**Speaker**  
Shaoliang Dong

### **Tune feedback system in the Taiwan photon source**

**Speaker**  
Hao-Wen Luo

### **Design and magnetic field measurement of type c nonlinear magnet**

**Speaker**

Wei Bo Hu

**Energy selection of synchrotron booster for SLRI beam test facility****Speaker**

Kritsada Kittimanapun

**Modernization of DARHT axis-I debris blocker****Speaker**

James Maslow

**An automated quad scan based emittance measurement software****Speaker**

Weijian Lin

**Development of a non-linear injection kicker for the TPS storage ring****Speaker**

Chin-Kang Yang

**Early prediction of system failures at LANSCE****Speaker**

Nikolai Yampolsky

**Using a particle-in-cell model for accelerator control room applications****Speaker**

Brandon Cathey

**Real-time data acquisition with CompactPCI serial platform at PSI****Speaker**

Radoslaw Rybaniec

18:00

16:00

**Thursday Poster Session: THPR****Poster Session** | **Location:** MCC Exhibit Hall A, Rock 'n Roll**Automated anomaly detection on European XFEL klystrons****Speaker**

Antonin Sulc

**Towards unlocking insights from logbooks using AI****Speaker**

Antonin Sulc

**Electronic brachytherapy replacement of iridium-192****Speaker**

Ben Freemire

**Investigating pulsed slow extraction schemes at the MedAustron synchrotron****Speaker**

Elisabeth Renner

**Reduction of radiotoxic lifetime of spent nuclear fuel to produce energy****Speaker**

Rolland Johnson

**Fabrication of 1.3 GHz Nb cavities at RadiaBeam****Speaker**

Aurora Cecilia Araujo Martinez

**The design of a rocket based RF electron accelerator for space applications****Speaker**

Mr Christopher Roper

**High fidelity numerical modelling and condition monitoring applied to septum magnets at CERN****Speaker**

Krzysztof Kawa

**Operation status of FRIB wedge systems and plan for power ramp up****Speaker**

Xing Rao

**Magnetic field study for air-cored HTS skeleton cyclotron****Speaker**

Tsun Him Chong

**Particle radiation in multilayer waveguides taking into account the frequency dependence of the electromagnetic parameters of the layers.****Speaker**

Dr Armen Grigoryan

**Design of a spin rotator for the ISIS Super-MuSR beamline****Speaker**

Dr Iker Rodriguez

**Improvements to 4-rod RFQs with additive manufacturing processes****Speaker**

Julius-Stephan Storch

**Design automation of pre-separator wedges for FRIB advanced rare isotope separator****Speaker**

Xing Rao

**Update on automated RF-conditioning utilizing machine learning****Speaker**

Klaus Kümpel

**Generation of bunched beam for SRF industrial cryomodules****Speaker**

Roman Kostin

**Research on ultra-high energy electron beams for FLASH radiation therapy at ELSA****Speaker**

Dennis Proft

**Selected beam measurements at PIP-II injector test facility**



**Speaker**

Arun Saini

**Medical irradiation studies at KIT accelerators****Speaker**

Michael Nasse

**RF conditioning of an IH-DTL cavity made using additive manufacturing****Speaker**

Dr Hendrik Hähnel

**Mechanical design of a QWR cavity for the new ISIS MEBT****Speaker**

Jonathan Cawley

**Design of cyclotron-based in-vacuum material irradiation beamline at TINT****Speaker**

Kritsada Kittimanapun

**Beam optics modelling of slow-extracted very high-energy heavy ions from the CERN Proton Synchrotron for radiation effects testing****Speaker**

Elliott Johnson

**FLASH proton therapy facility design with permanent magnet****Speaker**

Dejan Trbojevic

**Study of the performance and beam loss limitations during injection of high-intensity LHC proton beams****Speaker**

Stefano Redaelli

**Environmental sustainability in basic research: a perspective from HECAP+****Speaker**

Dr Hannah Wakeling

**Preparation for the conditioning of the MYRRHA CH-Cavities at IAP****Speaker**

Peter Braun

**Solid-state driven X-band linac for electron microscopy****Speaker**

Ankur Dhar

**The LOEWE-3 RFQ project****Speaker**

Klaus Kümpel

**Upgrade of the PS booster-to-ISOLDE beam transfer line to facilitate an increase in proton driver energy****Speaker**

Matthew Fraser

**Container stripping: enhanced classification of materials within cargo containers****Speaker**

Jasmin Burke

**Towards mitigation of challenges in development of high power ISOL targets****Speaker**

Sundeep Ghosh

**Electrical fire safety assessment of the synchrotron accelerator experimental station in NSRRC****Speaker**

Po-Jiun Wen

**Status of the Bonn Isochronous Cyclotron****Speaker**

Dennis Sauerland

**Development of a compact electron cyclotron resonance accelerator for industrial and security applications****Speaker**

Mark Palmer

**FLASHlab@PITZ beamline upgrade towards full functionality - status and plans****Speaker**

Christopher Richard

**Field shaping techniques in a spectrometer magnet in the presence of ferromagnetic shielding****Speaker**

Vera Korchevnyuk

**Focusing of high-energy electron beam using silicon crystals for application in radiotherapy****Speaker**

Marta Monikowska

**Optimizing the layout for a highly efficient multi-room particle therapy facility with a minimal footprint****Speaker**

Vivek Maradia

**Using octupoles to create uniform electron beam produced by irradiation accelerators****Speaker**

Weihang Gu

**A double multi-turn injection scheme for mixed  $^{12}\text{C}^{6+}$  and  $^4\text{He}^{2+}$  beams****Speaker**

Elisabeth Renner

**Towards the slow extraction of mixed He-2+ and C-6+ beams for online range verification**

**Speaker**

Elisabeth Renner

**Development of a multi-angle ultrahigh dose rate MV-level X-ray radiation system for FLASH radiotherapy clinical transformation****Speaker**

An Li

**Monte Carlo estimation of emittance growth during injection into the LANSCE PSR****Speaker**

Martin Kay

**Uranium spallation target chemistry for subcritical reactors****Speaker**

Rolland Johnson

**Development of a quality test platform for solid-state power amplifiers in NSRRC****Speaker**

Zong-Kai Liu

**The design of the proton-EDM injection line from BNL AGS booster****Speaker**

Jonathan Lee

**A new approach to solving the problem of an extended helical undulator****Speaker**

Dr Armen Grigoryan

**Effects of implantation temperature and annealing on structural evolution and migration of ruthenium in glassy carbon****Speaker**

Tasabeeh Alabid Jafer

**Optimizing non-linear kicker injection parameters using machine learning****Speaker**

Meghan McAteer

**High-power RF conditioning and 700 keV beam commissioning of the revised RFQ for the Frankfurt Neutron Source****Speaker**

Dr Hendrik Hähnel

**Status of ABC production line at Varex Imaging Corporation****Speaker**

Dr Andrey Mishin

**Study of stripping magnets for LACE at the SNS****Speaker**

Timofey Gorlov

**Simultaneous acceleration of multiple beams in novel LANSCE front end****Speaker**

Yuri Batygin

### **Current status of MINIBEE: minibeam beamline for preclinical experiments on spatial fractionation in the FLASH regime**

**Speaker**

Aikaterini Rousseti

### **Importance of quadrupole magnet fringing fields in low energy beam transport: example in the LIPAc 5 MeV D<sup>+</sup> beamline**

**Speaker**

Jibong Hyun

### **A pulsed Wien filter as a low-energy kicker**

**Speaker**

Brahim Mustapha

### **European Laboratories for Advanced Sciences - an EC funded transnational access project for nuclear, high-energy physics and accelerator experiments and R&D support**

**Speaker**

Ilias Efthymiopoulos

### **Revised error sensitivity study for the ESS proton linac**

**Speaker**

Sofia Johannesson

### **Design of IH-DTL with PMQ focusing for medical RI production**

**Speaker**

Hiromasa Yasuda

### **Information display board system to enhance safety management at the National Synchrotron Radiation Research Center**

**Speaker**

Po-Jiun Wen

### **Investigating X-ray detector systems using Monte Carlo techniques**

**Speaker**

Lauryl Eley

### **The X-ray imaging laboratory: a radiation test facility for validating industrial linacs**

**Speaker**

Michael Jenkins

### **Design study of a compact IH-DTL-based injector for proton therapy facilities**

**Speaker**

Yixing Lu

### **Dimensional and thermal design of the electrostatic chopper for the new ISIS MEBT**

**Speaker**

Dr Iker Rodriguez

### **ELISA: a compact linear accelerator for societal applications**

**Speaker**

Eleonora Pasino

**SAFEST project, a compact C-band RF linac for VHEE FLASH radiotherapy****Speaker**

Enrica Chiadroni

**Conditioning of rod-style RFQ in support of LANSCE front-end upgrade****Speaker**

Wesley Hall

**Alternative gamma-ray source based on 2.2 MeV linear accelerator with field emission cathode****Speaker**

Chunguang Jing

**Ernest Courant traineeship in accelerator sciences****Speaker**

Vladimir Litvinenko

**Nozzle design optimization for proton FLASH therapy****Speaker**

Georgios Kourkafas

**Progress on pulsed electron beams for radiation effects characterization of electronics****Speaker**

Atharva Kulkarni

**Practical design and manufacturing of the new ISIS MEBT chopper****Speaker**

Akanay Avaroglu

**Recovery of Neptunium-236g from Photon and Proton-Irradiated Actinide Targets****Speaker**

Jared Horkley

**Thermal diffusivity and acoustic properties of Nb thin films studied by time-domain thermoreflectance****Speaker**

Md Obidul Islam

**The gamma activation measurements at Shanghai Laser Electron Gamma Source (SLEGS)****Speaker**

Yuxuan Yang

**Fabrication and tuning of a 325 MHz ion-injector prototype for particle therapy facility****Speaker**

Yusen Guo

**A large momentum acceptance gantry for light-weight proton therapy facility: its beam lattice, magnets design and clinical advantages**

**Speaker**  
Yicheng Liao

### **First implementation of RF-KO slow extraction at COSY**

**Speaker**  
Philipp Niedermayer

### **Simple estimate, detailed computer simulation and measurement of the transverse kick in the SLAC accelerating structure**

**Speaker**  
Dr Aliaksei Halavanau

### **The Laser-hybrid Accelerator for Radiobiological Applications (LhARA): an update towards the conceptual design**

**Speaker**  
William Shields

### **Review of known extraction kickers**

**Speaker**  
Bang Nguyen

### **Power ramp up and minimization of beam losses at the facility for Rare Isotope Beams**

**Speaker**  
Alexander Plastun

### **Commissioning of the IOTA proton injector**

**Speaker**  
Alexander Romanov

18:00

16:00

## **Thursday Poster Session: THPS**

**Poster Session** | **Location:** MCC Exhibit Hall A, Blues

### **Mechanical design, structural requirements and optimization of the FCC e+e- interaction region components**

**Speaker**  
Francesco Franesini

### **3D printed beam correctors**

**Speaker**  
Mario Del Franco

### **Statistical evaluation of mechanical properties of RRR300 niobium sheets**

**Speaker**  
Hiroaki Umezawa

### **Improving the uniformity of magnetron sputtering titanium film for nonlinear injection kicker**

**Speaker**  
Wei-Yang Lai

### **Injectors de-cabling project**

**Speaker**

Fernando Dos Santos Pedrosa

**SSRF superconducting wiggler coil voltage monitoring system and quench monitoring results****Speaker**

Tianya Meng

**Integration of FCC-ee RF systems targets and challenges****Speaker**

Fani Valchkova-Georgieva

**Thermal analysis of rotating single slice graphite target system for FRIB****Speaker**

Mohit Patil

**Topology optimization of a dipole magnet using normalized gaussian network****Speaker**

Jie Li

**Perspectives and recent achievements on additive manufacturing technologies for accelerators****Speaker**

Prof. Toms Torims

**STAR High-Energy Linac status: complete installation acceptance tests****Speaker**

Luca Piersanti

**Cryogenic permanent magnet undulator at high beam currents****Speaker**

Jui-Che Huang

**Design and fabrication of the automation system in TLS BL07A end station****Speaker**

Wei-Yang Lai

**Relationship between anisotropy and cross rolling process for high purity niobium sheets****Speaker**

Hiroaki Umezawa

**Channeling performance of bent crystals developed at CERN****Speaker**

Philippe Schoofs

**Radiation dose simulations for Jefferson Lab's permanent magnet resiliency LDRD study****Speaker**

Bamunuvita Gamage

**LCLS II DC magnet power supplies - an overview**

**Speaker**

Sudarshan Harave

**Cold plate upgrade at the SNS****Speaker**

Yugang Tan

**Development of a cryogen free MgB<sub>2</sub> high temperature superconducting undulator****Speaker**

Osvaldo Chimalpopoca

**CXFEL labs****Speaker**

Mark Holl

**Enhanced harmonic stability in magnet resonant power supplies via multi-harmonic closed-loop control and current feedforward****Speaker**

Ran Li

**Field characterization of axially and radially magnetized neodymium rings****Speaker**

Tianzhe Xu

**Implementation and experience with the pilot CMDS control system at TS2, in view of operating the ESS LINAC cryogenics****Speaker**

Nuno Elias

**Design and installation of the liquid nitrogen transfer line for TPS 15A beamline endstation****Speaker**

Huang-Hsiu Tsai

**Design and testing of high stability power supply for high energy photon source****Speaker**

Yang Li

**LANSCe electromagnetic chopper and beam dynamic simulation****Speaker**

Sandra Biedron

**High-voltage nanosecond power supply simulation****Speaker**

Chunyu Xu

**Development of linear power operational amplifier for TPS correction magnet power supply****Speaker**

Bao-Sheng Wang

**3D integration methodologies of the accelerators at CERN**



**Speaker**

Fani Valchkova-Georgieva

**Hardware Commissioning of the HL-LHC Inner Triplet String Facility at CERN: Individual System and Short Circuit Tests****Speaker**

Samer Yammine

**Support structures and their removal improve performance of additively manufactured RF cavities****Speaker**

Michael Mayerhofer

**EMI measurement for SXFEL klystron-modulator system****Speaker**

Yongfang Liu

**Impact of Delta undulator on SIRIUS beam dynamics****Speaker**

Liu Lin

**Pressure spike in the LBNF absorber core's gun drilled cooling channel from an accident beam pulse****Speaker**

Abhishek Deshpande

**Modernizing of magnet power supplies at KARA and a transition to EPICS-based control system****Speaker**

Akira Mochihashi

**Thermal-fluid analysis and operation of a low power water-cooled tilted beam dump at Facility for Rare Isotope Beams****Speaker**

Raul Quispe-Abad

**A 50 kV pulse generator for fast kickers****Speaker**

Alexander Smirnov

**Design and instrumentation for permanent magnet samples exposed to a radiation environment****Speaker**

Ryan Bodenstein

**A new cryogenic permanent magnet undulator at BESSY-II: the CPMU-20****Speaker**

Stefan Schäfer

**New insertion devices for BRIGHT beamlines at the Australian Synchrotron****Speaker**

Tessa Charles

**Strain measurements of the Apple-X SABINA undulator with fiber Bragg grating**

**Speaker**

Ilaria Balossino

**Comparative study of decay heat calculations with FLUKA and MCNP/CINDER2008****Speaker**

Yong Joong Lee

**Assembly process and inspection results for W100****Speaker**

Wei-Yang Lai

**Diffusion bonding of tungsten-vanadium-zirconium using vacuum hot pressing for the development of a low decay heat cladding solution for tungsten spallation targets****Speaker**

Yong Joong Lee

**Study and simulation of cryogenic photonic-band-gap disk-loaded structure****Speaker**

Yusen Guo

**Measurement of ozone concentration at the BL-02A beamline hatch in the Taiwan photon source for ensuring personnel safety****Speaker**

Po-Jiun Wen

**Simulation study of nanosecond pulse power based on gyromagnetic nonlinear transmission line****Speaker**

Wenbin Zhang

**Proton beam power limits for stationary water-cooled tungsten target with different cladding materials****Speaker**

Yong Joong Lee

**PLAN analytics for enhanced understanding of RUN3 and LS3 activities at CERN****Speaker**

Ayla Borglund

**Design and characterization of adjustable-length pulse generator for beam kicker system****Speaker**

Bang Nguyen

**Real-time digital controller design based on SoC FPGA for general usage in J-PARC MR magnet power supplies****Speaker**

Yulian Tan

**Magnetic measurements for Halbach-type permanent quadrupoles using a single-stretched wire system****Speaker**

Antonio Trigilio

**Design of local control system for injection of fast pulse power supply for HEPS****Speaker**

Peng Liu

**Qualification of components for installation in LHC kicker magnets****Speaker**

Miguel Diaz Zumel

**Permanent magnet resiliency in CEBAF's radiation environment: LDRD grant status and plans****Speaker**

Ryan Bodenstein

**Experimental design for validating the feasibility of in-situ plasma cleaning of normal conducting copper cavities****Speaker**

Qianxu Xia

**Numerical analysis on a modified air conditioning system of the experimental hall at TPS****Speaker**

Wen Shuo Chan

**Development of high-current correction magnet power supply for TPS facilities****Speaker**

Bao-Sheng Wang

**A study on the application of photoconductive switches for kicker excitation pulse power supply****Speaker**

Feng-lei Shang

**Research on key technologies for resonance injection of a compact X-ray light source****Speaker**

Shaoxiang Dong

**Multi-physics and multi-objective design optimization of quadrupole resonators under geometric uncertainties****Speaker**

Piotr Putek

**Precision current measurement and calibration system for the APS-U unipolar magnet power supplies****Speaker**

Robert Keane

**Study on the strength of large grain sliced niobium discs****Speaker**

Hiroaki Umezawa

**Ultrafast high-voltage kicker system hardware for ion clearing gaps**

**Speaker**

Alexander Smirnov

**Bead-pull measurement procedure for AREAL linear accelerator accelerating structure****Speaker**

Dr Armen Grigoryan

**Investigation of onset field variations in diversely fabricated samples through field emission scanning microscopy****Speaker**

Frederic Braun

**Design study of a compact superconducting undulator based on laser-structured HTS tapes****Speaker**

Andreas Grau

**A novel pulse compressor with dielectric assistance****Speaker**

Boyuan Feng

**Upgrade of the SPARC\_LAB low level radiofrequency system****Speaker**

Luca Piersanti

18:00