Session Program

15–19 Sept 2025

MEDSI2025 - 13th International Conference on Mechanical Engineering Design of Synchrotron Radiation Equipment and Instrumentation

Thursday Poster Session

The Loop
Lund, Sweden

Thursday 18 September

16:40

Thursday Poster Session

Poster Session | **Location:** The Loop, Lund, Sweden | **Convener:** Mr Anders Bjermo

Vacuum chamber fabrication for various light sources around the world

Speaker
Greg Wiemerslage

Beam-induced heating on the sector gate valve in the SPring-8-II storage ring

Speaker
Hiroshi Ota

Residual gas analysis in oxygen-free Pd/Ti deposited UHV chamber

Speaker
Takashi Kikuchi

Activation mechanism of surface partially nitrided high-purity titanium deposited film as a nonevaporable getter (NEG) studied by soft X-ray photoelectron spectroscopy (XPS) and angle-resolved hard X-ray photoelectron spectroscopy (HAXPES)

Speaker
Kazuhiko Mase

Pumping station for UCV and UHV Components in the European XFEL cleanroom

Speaker
Joshua Ohnesorge

Evaluation of 3D-printed plastics for ultra-high vacuum applications: Outgassing, and residual gas analysis

Speaker
Artur Domingues

Fully NEG-coated vacuum system design for the storage ring of Iranian Light Source Facility

Speaker
Hossein Karimi

Verification of SPring-8-II vacuum system prototype chamber

Speaker
Dr Kazuhiro Tamura

Application of AI intelligent control in utility systems

Speaker
Zong-Da Tsai

Becoming a synchrotron designer; experiences, challenges, and teachings.

Speaker
Owen Harding

Strategic maintenance transformation: integrating processes, tools, and asset intelligence

Speakers
Andreas Lassesson, Gurhan Yana, Johan Thånell

In-situ characterization thermal contact variations between InGa and anti-corrosion layer for beamline thermal management

Speaker
Jie Chen

Numerical simulation and thermal optimization of a catalysis chamber for the MIRAS beamline at the ALBA synchrotron

Speaker
Ms Barbara de Abreu Francisco

FE-Analyses as the key to successful high-temperature brazing of complex components

Speaker
Martin Lemke

Heat load study of insertion devices for the Iranian Light Source Facility

Speaker
Hossein Karimi

As-build process for accelerator, target and neutron scattering systems at European Spallation Source

Speaker
Antoine Lepine

Vibration stability of a liquid nitrogen cooled double-crystal monochromator at HALF

Speaker
Zhanglang Xu

Experimental evaluation of vibrational sensitivity in the Veritas spectrometer arm

Speaker
Gabor Felcsuti

Vacuum system design for the booster of Iranian Light Source Facility

Speaker
Hossein Karimi

Vacuum system design and prototyping for the ALBA II upgrade

Speaker
Ricardo Parise

An ultra-stable, 3-axis goniometer for precise angular positioning for optical metrology of X-ray mirrors

Speaker
Simon Alcock

Determination of a reliable metrology method to characterize a sphere of confusion in the hundred of nanometer range

Speaker
Aymeric Cunrath

Research on the stability of BPM independent support system

Speaker
Anxin Wang

A vibration control method for linear accelerator

Speaker
Zhidi Lei

Experimental characterization of rail-to-carriage dynamic stiffness in linear guides

Speaker
Gabor Felcsuti

Environmental vibration characterization and spectral analysis of ground motion sources at the SHINE facility

Speaker
Dr Fang Liu

Stability evaluation of a double crystal monochromator using an optical linear encoder

Speaker
Masato Okui

High-stability double multilayer monochromator with gravity-driven water cooling for the SDB beamline at HEPS

Speaker
Hao LIANG

Vibration stability measurement and simulation for the Future Circular Collider studies

Speakers
Audrey Piccini, Michael GUINCHARD

Characterization and damping control of mechanical connections to improve performance of horn stripline

Speaker
Zunping Liu

From 80 nrad to 35 nrad: active damping control achieves sub-50-nrad stability in SHINE's beamline mirror system

Speaker
Dr Fang Liu

Improvement of structural dynamic stability experimental assessment: principle and actual performance of advanced methods

Speakers
Mr Nicolas Jobert, Zhengxuan Fan

Progress and development of the offset mirror system for SHINE

Speaker
Zuyang Ren

Nano-tomography instrumentation based on magnetically levitated 6 DoF actuation

Speaker
Dr Theo Ruijl

ROCK-IT: automated sample handling for operando catalysis at synchrotron beamlines

Speaker
Shrouk Ehab

Designing a 3-axis delta robot capable of sub-nanometre stability for a synchrotron flagship beamline

Speaker
Scott Beamish

Advanced motor test bench developments for beamline motion system characterization

Speaker
David Kraft

Mechanical design of a flexible bunch compressor for SHINE linac

Speaker
Fei Gao

NSLS-II magnetron coating system and upgrade

Speaker
Paul Palecek

Commissioning of the APS-Upgrade storage ring vacuum system

Speaker
Jason Carter

The first particle-free beam stop for the ESS superconducting linac

Speaker
Artur Gevorgyan

In-situ vibration measurements for evaluating impact of low conductivity water induced vibrations on Advanced Light Source upgrade (ALS-U) accumulator ring magnets and electron beam positioning monitors

Speaker
Ryan Johnson

Experimental modal analysis, model correlation, and tuning for synchrotron storage rings applications

Speaker
Ryan Johnson

ConFlat® vacuum flange application and analysis in various non-circular flange geometries

Speaker
Michael Seegitz

FEA simulations for the reuse of front-end components for PETRA IV

Speaker
Jörn Seltmann

Advanced figure control scheme for piezoelectric deformable mirror

Speaker
Baoning Sun

Simulation approaches for magnet design in the ALBA II synchrotron upgrade

Speaker
Ms Barbara de Abreu Francisco

Extended travel range and parallel-decoupled compliant positioning mechanism for medium energy resolution monochromator at HEPS

Speaker
Lu Zhang

The new Nanomotion laboratory at ALBA

Speaker
Juan Luis Frieiro

Final design stage completed: SX-700 successor ready for production

Speaker
Frank Eggenstein

Parallel flexure-based RADSI instrument for curved X-ray mirror metrology

Speaker
Lukas Lienhard

Can stepper motors replace the piezos in a high-resolution monochromator?

Speaker
Frank-Uwe Dill

Comparison of FEA simulations and experimental data for a new germanium detector for X-ray spectroscopy at synchrotron facilities

Speaker
Dr Marcos Quispe

Minimization of the heat-induced deformation in the switching mirror for the Elettra 2.0 nanoESCA/nanospectroscopy beamline

Speaker
Giulio Scrimali

Thermal analysis and design optimization of a DCM for Korea-4GSR based on PLS-II benchmarking

Speaker
Dr Jinjoo Ko

Corrosion-suppressed thermal interfaces with indium-gallium alloy for high-energy synchrotron beamline cooling

Speaker
Dezhi Diao

High heat load annealed pyrolytic graphite filter for the material science beamline at SESAME

Speaker
Mohammad AL-Najdawi

Simulation study on the motion process of copper foil tensioning device in vacuum undulator

Speaker
Hongcui Wang

Mechanical design and analysis for a DMM at the EMBL@PETRA III beamline P14

Speaker
Enrique Rodriguez Garcia

17:40