

SUNDAY, JUNE 21: RECEPTION AT 6 PM (TERRACE)

MONDAY, JUNE 22

SESSION 1 – Plenary I

Discussion Leader: A. Erickson (Georgia Tech, USA)

- 8:30 Anna Erickson (Georgia Tech, USA)**
Welcoming Remarks & Keynote — Introduction to the Conference
- 9:05 Andy Buffler (University of Cape Town, South Africa)**
Compact Neutron-Gamma Monitoring for Space and Aviation Environments
- 9:40 Mitaire Ojaruega (NGA, USA)**
Precise Time Keeping with Nuclear Clocks

10:15 Coffee Break

SESSION 2 – Plenary II

Discussion Leader: E. Gazis (NTUA, Greece)

- 10:40 Ciprian Plostinar (European Spallation Source, Sweden)**
Status of the ESS Accelerator
- 11:15 Fredrik Tovesson (Argonne National Laboratory, USA)**
Accelerator-Based R&D for Nuclear Nonproliferation
- 11:50 Donald Hornback (Brookhaven National Laboratory, USA)**
Space Effects Testing at Brookhaven National Laboratory

12:15 Lunch, Inter-Session

16:30 Coffee and Discussion

SESSION 3 – Detection in Nuclear Security

Discussion Leader: S. Biegalski (Georgia Tech, USA)

- 17:00 Willy Kaye (H3D, Inc., USA)**
Full Utilization of Imaging Spectrometer Capabilities
- 17:25 Paul Scoullar (Southern Innovation, Australia)**
LUCID: Model-Free High-Rate Photon Counting
- 17:50 Malcolm Joyce (Lancaster University, UK)**
Improved Pulse-Shape Discrimination Combining Spatial and Temporal Interaction Dependences in Organic Scintillators
- 18:15 Anna Erickson (NuHorizon Technologies)**
iGART: Deployment Results and Lessons Learnt
- 18:40 Ceri Clemett (AWE, UK)**
Detection of Radiation on High Speed and High Traffic Volume Roads

20:00 Dinner

TUESDAY, JUNE 23

SESSION 4 – Accelerator Facilities & Status Updates

Discussion Leader: A. Curcio (Sapienza, Italy)

- 8:30 Marta Bajko (CERN, Switzerland)**
Status of the HL-LHC
- 8:55 Gerardo D’Auria (Elettra Sincrotrone Trieste, Italy)**
The PACRI project for plasma accelerator technology
- 9:20 Lucia Giuliano (Sapienza University of Rome, Italy)**
C-Band 24 MeV Linac Prototype for FLASH Radiotherapy @ Sapienza
- 9:45 Massimo Ferrario (INFN-LNF, Italy)**
The EuPRAXIA project: a plasma-based accelerator user facility for the next decade
- 10:10 Emmanuel Tsesmelis (CERN, Switzerland)**
The Future Circular Collider (FCC) at CERN

10:35 Coffee Break

SESSION 5 – Detectors & Materials I — Scintillators

Discussion Leader: L. Palumbo (Sapienza, Italy)

- 11:05 Martin Nikl (Fyzikální ústav AV ČR, Czech Republic)**
Multicomponent Garnet Scintillators: The Latest Achievements and Perspectives
- 11:30 Jan Tous (CRYTUR, spol. s r.o., Czech Republic)**
High-Efficiency (Gd, Y)AlO₃:Ce Scintillators for Compact Gamma-Ray Spectrometry in Nuclear Safety and Logging Applications
- 11:55 Wei Wang (Independent Researcher)**
Structural Engineering and Performance Characterization of Low-Dimensional Halide Scintillators for Nuclear Radiation Detection
- 12:20 Daniel Rutstrom (Air Force Institute of Technology, USA)**
Organic Scintillator Material Development: Deuterated Plastics and Organic Crystal Growth

12:45 Lunch, Inter-Session

16:30 Coffee and Discussion

SESSION 6 – Nonproliferation & Safeguards

Discussion Leader: M. Joyce (Lancaster University, UK)

- 17:00 Lei Raymond Cao (Ohio State University, USA)**
Quantitative Assessment of Hydrogen and Tritium Absorption and Desorption Efficiency in Palladium for Tritium Gas Detection
- 17:25 Brett Isselhardt (LLNL, USA)**
Laser Based Enrichment Safeguards Approach Analysis
- 17:50 Avery Nguyen (MIT, USA)**
Calorimetric and Structural Signatures of Uranium Enrichment in Fluorinated Polymers

- 18:15 Dominic Piedmont (Brookhaven National Laboratory, USA)**
Synchrotron-Based Particle Characterization for Challenging Nonproliferation Applications

19:30 Dinner

WEDNESDAY, JUNE 24 – Free day

Dinner at your leisure

THURSDAY, JUNE 25

SESSION 7 – Detectors & Materials II — Novel Materials

Discussion Leader: M. Nikl (FZU, Czech Republic)

- 8:30 Pierluigi Casolaro (INFN Napoli, Italy)**
Radiation Effects in Solid-State Devices through Impedance Spectroscopy
- 8:55 Evangelos Gazis (N. T. U. of Athens, Greece)**
ATLAS Muon Spectrometer Upgrade for the HL-LHC challenges
- 9:20 Jingyu Lin (Texas Tech University, USA)**
Hexagonal Boron Nitride (h-BN) Thermal Neutron Detectors with Record High Detection Efficiency of 60%
- 9:45 Emmanouil Trachanas (European Spallation Source, Sweden)**
Multi-Scale Characterization of Irradiation-Induced Degradation in RFQ Cavities

10:10 Coffee Break

SESSION 8 – Imaging, AI & Algorithms

Discussion Leader: W. Kaye (H3D, Inc., USA)

- 10:40 Steven Biegalski (Georgia Tech, USA)**
Sensitivity of Machine Learning Peak Detection in Gamma-Ray Spectroscopy
- 11:05 John Michael DeCarlo (Brookhaven National Laboratory, USA)**
An Overview of Current Uses and Future Considerations on the Use of AI in Nuclear Security Applications
- 11:30 Micheal Short (MIT, USA)**
AI for Nuclear Materials, Nuclear Materials for AI: Increasing Data Throughput in Anticipation of Model Training
- 11:55 Andy Haefner (Gamma Reality Inc., USA)**
Multi-Sensor Data Fusion for Active and Passive 3D Radiation Imaging Systems
- 12:20 Emmanouil Trachanas (European Spallation Source, Sweden)**
Geometry Parametric Study of Resonant Ultrasound Spectroscopy (RUS) Using the Rayleigh-Ritz Technique

12:45 Lunch, Inter-Session

16:30 Coffee and Discussion

SESSION 9 – Applications & Safeguards

Discussion Leader: M. Short (MIT, USA)

- 17:00 Brianna Ryan (MIT, USA)**
Using the Time-Dependent Reactor Neutrino “Shutdown Curve” to Safeguard Nuclear-Powered Naval Submarines
- 17:25 Ioannis Ploumistakis (Technical University of Crete, Greece)**
High-Flux Neutron Compact Configurations: A Study via Numerical Simulations
- 17:50 Quinn Marksteiner (LANL, USA)**
Plasma Wave Generation in Space Using either Compact Antennas or a Modulated Electron Beam
- 18:15 Hongxing Jiang (Texas Tech University, USA)**
Direct Detection of 14.1 MeV Neutrons by Multi-Stacked h-BN Detector
- 18:40 Ágnes Csizsárik-Kocsir (Óbuda University)**
Energy Transition and Public Opinion: A Comparative Assessment of Nuclear Energy

20:00 Dinner

FRIDAY, JUNE 26

SESSION 10 – Accelerator R&D

Discussion Leader: A. Buffler (Univ. of Cape Town, South Africa)

- 9:00 Nick Gazis (European Spallation Source, Sweden)**
Mechanical Engineering at ESS
- 9:25 Stefano Farina (Sapienza University of Rome, Italy)**
Design of a Compact 100 MeV Linac for Deep Tumors FLASH Radiotherapy
- 9:50 Vincenzo Variale (INFN Bari, Italy)**
Low Energy Ion Beam Recovery Experimental Test for Fusion Application

10:15 Coffee Break

SESSION 11 – Medical & Dosimetry Applications

Discussion Leader: N. Gazis (European Spallation Source, Sweden)

- 10:45 Evangelos Gazis (N. T. U. of Athens, Greece)**
Review of Innovative Medical Accelerators for Diagnosis and Therapy
- 11:10 Pierluigi Casolaro (INFN Napoli, Italy)**
Fiber-Coupled Scintillator Dosimeters for FLASH Radiotherapy and Space Radiation Monitoring

20:00 Gala Dinner

