

Session Program

24-27 Nov 2025

2nd AI-INFN Advanced Hackathon

Flash seminars

Collegio Borromeo, Pavia
Piazza del Collegio Borromeo, 9, 27100 Pavia PV

Monday 24 November

14:30

Flash seminars: Innovative applications of Deep Learning

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV | **Convener:** Luca Clissa

14:30-14:50

Developing Artificial Intelligence in the Cloud: the AI_INFN platform & InterLink

Speaker

Rosa Petrini

14:50-15:10

ARDE: Neural network-based algorithms for discrimination between electrons and γ -rays

Speaker

Naomi Marchini

15:10-15:30

Neural Network for Classification and Assembly of Nuragic Amphorae

Speaker

Marta Magalini

15:30-15:50

Crop Classification using High-Performance Deep Learning Predictive Models for Agricultural Yields Analysis

Speaker

Andrea Miola

16:00

16:30

Flash seminars: Medical Physics 1

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV

16:30-16:45

Methodology insights of computing resource intensive analysis: the case of MGMT prediction on multiparametric MRI of patients with glioblastoma

Speaker

Francesca Lizzi

16:45-17:00

AI-Driven Quantitative Imaging in Medical Physics: From Clinical Nuclear Medicine in Prostate Cancer to Preclinical Radiobiology Models

Speaker

Giovanni Pasini

17:00-17:15

CycleGAN for Kernel-to-Kernel CT Harmonization and Low-Dose CT Denoising via Transfer Learning

Speaker

Francesca Camagni

17:15-17:30

Development and Integration of an Automatic Patient Positioning Algorithm for BNCT within the IT_STARTS Treatment Planning System

Speaker

Ms Cristina Pezzi

17:30-17:45

AI-assisted Thrombus Segmentation in Acute Ischemic Stroke Patients: a Multi-Disciplinary Approach

Speakers

Giada Minghini, Giada Minghini

17:45-18:00

Control-Integrated Pipeline for Disease Analysis: A Case Study on Hypertension Comorbidities

Speaker

Alice Magnoni

18:30

Tuesday 25 November

09:55

Flash seminars: Medical Physics 2

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV | **Convener:** Francesca Lizzi

09:55-10:10

Flow-Based Synthetic Data Generation for Fluorescence Spheroid Images

Speaker

Tommaso Giacometti

10:15-10:30

Novel Artificial Intelligence approaches for Redness Hyperemia Analysis

Speaker

mariachiara stellato

10:30

12:25

Flash seminars: Quantum Machine Learning

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV | **Convener:** Laura Cappelli

12:25-12:40

Learning time-varying Gaussian quantum lossy channels

Speaker

Angela Rosy Morgillo

12:45-13:00

Quantum Machine Learning for High-Energy Physics: A Quantum Neural Network Approach

Speaker

Eric Ballabene

13:00

Wednesday 26 November

09:35

Flash seminars: High Energy Physics

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV

09:35–09:50

Machine Learning for K0 Event Reconstruction in the LHCf Experiment

Speaker

Andrea Paccagnella

09:55–10:10

GN3: The Latest Transformer-Based Flavour Tagging Algorithm in ATLAS

Speaker

Michele D'Andrea

10:15–10:30

Deep Learning-Based identification of soft taus in the L1 Scouting stream for Phase-2

Speakers

Francesca Camagni, Valentina Camagni

10:30

12:45

Flash seminars

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV

12:45–13:00

FPGA-based Deep Processing Units for Biomedical Segmentation: A U-Net Benchmarking Study

Speaker

Valentina Sisini

13:00

Thursday 27 November

10:05

Flash seminars: Astroparticles

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV

10:05-10:30

Application of Artificial Intelligence Techniques to Tracking Systems in Space Experiments

10:30

11:00

Flash seminars: Astroparticles 2

Session | **Location:** Collegio Borromeo, Pavia, Piazza del Collegio Borromeo, 9, 27100 Pavia PV

11:00-11:15

Hybrid Theory-Simulation Machine Learning Approach to Backtracing

Speaker

Luca Tabarroni

11:20