

Joint ECFA-NuPECC-APPEC Activity Workshop "Synergies between the EIC and the LHC"

22–24 September 2025

Institute of Nuclear Physics Polish Academy of Sciences
Kraków, Poland

The goal of this workshop is to stimulate and strengthen collaboration among the European particle physicists to mutually benefit from the synergies between theory developments and experiments at the planned U.S.-based Electron-Ion Collider (EIC) and the Large Hadron Collider (LHC) at CERN

TOPICS

Proton structure including spin
Forward physics
Diffraction and saturation
Nuclear effects
Probes: photon, quarkonia and jets
Detector developments and future facilities
MC generators and analysis tools
AI for EIC/LHC



Webpage

Local Organising Committee:

<https://indico.ifj.edu.pl/event/1417/>

Krzysztof Kutak (IFJ PAN)

Antoni Szczurek (IFJ PAN)

Jacek Otwinowski (IFJ PAN)

Jakub Wagner (NCBJ)

Sahil Upadhyaya (IFJ PAN)

Leszek Motyka (UJ)

JENA Activity coordinators:

Daniël Boer (Groningen U.)

Pasquale di Nezza (INFN-LNF & CERN)

Maria Vittoria Garzelli (Hamburg U.)

Contact info:

eiclhc@ifj.edu.pl



Social Dinner

Tuesday, 23rd September 2025

19:00 onwards

Venue

AVANGARDA
RESTAURACJA

Restauracja Avangarda

Mikołaja Żybkiewicza 1, 31-029 Kraków

Restaurant website: [Click here!](#)

Location: [Google maps](#)



Program

22-24 Sept 2025

Joint ECFA-NuPECC-APPEC Workshop “Synergies between the EIC and the LHC”

The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences
ul. Radzikowskiego 152 31-342 Kraków, Poland

Monday 22 September

09:00

Welcome

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Tadeusz Lesiak (IFJ PAN Kraków)

09:20

09:20

Science and Status of the Electron-Ion Collider

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Rolf Ent (Thomas Jefferson National Accelerator Facility)

09:50

09:50

QCD at the LHC and synergies with the EIC

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Stefano Forte (Universita' di Milano and INFN)

10:20

10:20

Theory perspective on EIC physics programme

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Anna Stasto (Penn State)

10:50

10:50

Coffee Break

Break |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

11:20

11:20

What has COMPASS taught us on spin of hadrons?

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Barbara Badelek (University of Warsaw)

11:50

11:50

Proton Parton Densities from Deep Inelastic Scattering only - from the current to the ultimate picture

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Katarzyna Wichmann (DESY)

12:20

12:20

EIC-LHC synergies for gluon distributions

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Daniël Boer (University of Groningen)

12:50

12:50

Lunch Break

Break |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

14:20

14:20

ePIC: A General-Purpose Detector for the EIC**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Brian Page (Brookhaven National Laboratory)

14:45

Physics performance of the ePIC detector - ongoing and planned studies**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Salvatore Fazio (University of Calabria and INFN-Cosenza)

15:10

Detector Technologies for the EIC Exclusive Physics Program**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Alex Jentsch (Brookhaven National Laboratory)

15:35

Development and performance of the dRICH SiPM-based photodetector for the ePIC experiment at the EIC**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Riccardo Ricci (INFN Bologna)

16:00

Coffee Break**Break** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

16:30

Constraining the Energy-Momentum Tensor**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Cédric Mezrag (Irfu, CEA, Université Paris-Saclay)

16:55

Lattice QCD Calculations of TMDs and GPDs Through LaMET**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Min-Huan Chu (Adam Mickiewicz University, Poznań)

17:20

Heavy-quark mass effects in off-light-cone distributions**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Michael Fucilla (Narodowe Centrum Badań Jądrowych (NCBJ))

17:45

Tuesday 23 September

09:00

ATLAS Overview

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Klaudia Maj (AGH University of Krakow)

09:25

09:25

Phase-2 Upgrades of the CMS Detector

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Matthew Nguyen (Laboratoire Leprince-Ringuet / École Polytechnique (CNRS))

09:50

09:50

TBA

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Ionut Arsene (University of Oslo (NO))

10:15

10:15

Opportunities for Heavy Ion at ATLAS with the Phase-II upgrades and synergies with the EIC

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Riccardo Longo (Università di Torino & INFN Torino)

10:40

10:40

Coffee Break

Break |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

11:10

11:10

Higher-order QCD calculations for hard scattering processes

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Rene Poncelet (IFJ PAN)

11:35

11:35

Improving perturbative calculations for forward physics and saturation

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Andreas van Hameren (IFJ-PAN, Krakow)

12:00

12:00

Recent Developments in Herwig 7

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Andrzej Siodmok (Jagiellonian Univ. Krakow and LPNHE Paris)

12:25

12:25

Scale dependence of PDFs and GPDs: Anomalous dimensions from consistency relations

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Sam Van Thurenhout (HUN-REN Wigner RCP)

12:50

12:50

Lunch Break

Break |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

14:20

14:20

Pinning down nuclear PDFs with the LHC

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Aleksander Kusina (IFJ PAN Krakow)

14:45

14:45

Nuclear effects in UPCs and implications for EIC

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Vadim Guzey (University of Jyväskylä)

15:10

15:10

Double Parton Scattering and Double PDFs

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Jasper Amirante (University of Manchester)

15:35

15:35

TBA

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Simonetta Liuti (University of Virginia)

16:00

16:00

Coffee Break

Break |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

16:30

16:30

Probing TMDs through double quarkonium production in hadronic collisions

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Cristian Pisano (University and INFN Cagliari)

16:55

16:55

Hadron-in-jet production in (un)polarized pp collisions: TMD FF phenomenology

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Umberto D'Alesio (University and INFN Cagliari)

17:20

17:20
17:45
19:00
22:00

TMD PB method: a MC approach based on TMD factorization

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Aleksandra Lelek (University of Antwerp)

Social Dinner

Break | **Location:** Avangarda Restaurant, Mikołaja Żyblikiewicza 1, 31-029 Kraków

Wednesday 24 September

09:00

From HERA to EIC through UPC at LHC

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Guillermo Contreras (Czech Technical University)

09:25

09:25

CMS synergies with the EIC, plus femtoscopy

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Máté Csanád (Eötvös University)

09:50

09:50

ALICE results on ultra-peripheral collisions and their impact on the EIC

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Adam Matyja (Institute of Nuclear Physics PAN , ul. Radzikowskiego 152, 31-342 Kraków, Poland)

10:15

10:15

Emission of neutrons and protons in photoproduction on nuclei in UPC at the LHC and EIC

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Antoni Szczurek (Institute of Nuclear Physics PAN and Rzeszow University)

10:40

10:40

Coffee Break

Break |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

11:10

11:10

Exclusive photoproduction of $\pi^+\pi^-$ pairs in the tensor-pomeron approach

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Piotr Lebiedowicz (IFJ PAN, Cracow)

11:35

11:35

S-wave quarkonia production by $\gamma^* \gamma$ in e-A collisions

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Izabela Babiarczy (Institute of Nuclear Physics Polish Academy of Sciences)

12:00

12:00

Probing the photon Wigner distribution with dilepton production at small q_T in UPCs

Contribution |

Location: The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |

Speaker: Luca Maxia (LPHE - CNRS & Sorbonne)

12:25

12:25

First insight into TMD fragmentation physics at photon-photon colliders**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Francesco Murgia (INFN Cagliari)

12:50

12:50

Lunch Break**Break** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

14:20

14:20

Exploring exclusive factorization beyond the leading twist regime within saturation physics**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Lech Szymanowski (National Centre for Nuclear Research (NCBJ), Warsaw)

14:45

14:45

Rapidity regulators for the CGC: F_L at NLO**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Guillaume Beuf (National Centre for Nuclear Research (NCBJ), Warsaw)

15:10

15:10

CGC beyond eikonal approximation**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Tolga Altinoluk (National Centre for Nuclear Research, Warsaw)

15:35

15:35

Top-down approach to improving the BK equation**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Renaud Boussarie (CPHT, CNRS, Ecole polytechnique, IP Paris)

16:00

16:00

Coffee Break**Break** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland

16:30

16:30

Extracting the gluon density at the Electron-Ion Collider from F_L measurements**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Javier Jiménez-López (Universidad Complutense de Madrid)

16:55

16:55

Machine Learning Approaches to Hard Exclusive Processes**Contribution** |**Location:** The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences, ul. Radzikowskiego 152 31-342 Kraków, Poland |**Speaker:** Marija Cuic (Irfu, CEA, Université Paris-Saclay/Aidas)

17:20