



JLab Users' Organization BoD Bio & Candidate Statement Cristiano Fanelli, M.I.T.

Education and Professional background:

From 2022: Assistant Professor, William and Mary
2021-2022: AI Institute for Artificial intelligence and Fundamental Interactions Affiliate
2020-2022: Research Scientist, Laboratory for Nuclear Science, M.I.T.
2020-present: Adjunct Professor, University of Regina
2015-2020: Postdoctoral Associate, Laboratory for Nuclear Science, M.I.T.
2015: Visiting Researcher, Jefferson Lab
2015: Ph. D., Physics, Sapienza: Thesis: [Measurements of Polarization Transfers in Real Compton Scattering by a proton target at JLAB: a new source of information on the 3D shape of the nucleon](#)

Publication list:

[scholar.google](#)

Research Experience, Expertise and Interests:

Polarization transfer in wide-angle Compton scattering; light quark mesons and gluonic excitations with linearly polarized photons; double polarization observables in pentaquark photo-production; photo-production of axion-like particles and leptophobic bosons. Machine learning in nuclear physics experiments at both Jefferson Lab and the Electron Ion Collider: pattern recognition for imaging Cherenkov detectors; AI-assisted design of the dual RICH and the tracking system at the EIC; ML-based reconstruction algorithms in Streaming Readout for the next generation electron scattering experiments.

Professional Service/Responsibilities (last 2 years):

- AI/ML at JLab and EIC, JLab Scientific Computing Review
- Invitation at the IAEA/UN Technical Meeting on AI for Nuclear Technology and Applications
- External Advisor: AI support to CLAS12 SW
- EICUG Software/AI WG delegate for the Computing Coordination Group at the EIC
- Co-convener of the Computing Software WG of the Detector-1 at EIC
- Co-convener of the Computing Team of the ECCE consortium
- Organizer of the first workshop on Artificial Intelligence for the Electron Ion Collider
- Co-Editor of JINST (AI4EIC)
- Co-convener of the EICUG Software Working Group

Candidate Statement

My involvement in Jefferson Lab research began as an international graduate student and continued during the years with the participation in different research activities at JLab as a national user. These experiences allowed me to get a better understanding of the JLab culture, the issues that we face as users, and the importance of the JLab User Organization. JLUO plays a crucial advocacy role for the user community interests and concerns with the lab management and at the same time offers fundamental advice on the users perspective to the lab management; it guarantees to fulfill the lab's science program in a diverse and inclusive environment, promotes the most effective utilization of the lab resources for the common good of the society, and furthers the scientific outreach through a regular and vibrant communication with the general public. As a user community we are currently engaged to effectively conduct the JLab 12 GeV research program while preparing for the EIC era. JLab will continue to advance the role of computation in Nuclear Physics considering the evolving landscape of computing and the ongoing revolution in AI and data science. In this regard I will leverage the experience gained from my direct involvement in the JLab science program and convenership roles in computing and software. It would be an honor for me to serve our user community as an at-large member of the JLUO Board of Directors. I will make every effort to successfully advocate for our interests and scientific objectives.