

EICUG 2022 FALL QUARTERLY MEETING

Renee Fatemi and Marco Radici
for the EICUG Steering Committee
November 17, 2022

10:00

Welcome and News from the Steering Committee

Marco Radici et al.

BNL

10:00 - 10:20

News from the Project

Rolf Ent

BNL

10:20 - 10:50

News from ePIC

Bernd Sarrow

11:00

BNL

10:50 - 11:15

News from the 2nd Detector Working Group

Pawel Nadel-Turonski

BNL

11:15 - 11:35

Break

BNL

11:35 - 11:50

Update from the Software Working Group

Andrea Bressan et al.

12:00

BNL

11:50 - 12:15

News from the ED&I Committee

Dr Paul Gueye

BNL

12:15 - 12:40

Update from AI4EIC

Cristiano Fanelli et al.

BNL

12:40 - 13:05

13:00

EICUG Charter Discussion

Richard Milner

BNL

13:05 - 13:30

USERS GROUP



1369 Members

- 847 experimentalists
- 348 theorists
- 159 accelerator scientists
- 9 computer scientists
- 4 support
- 2 other

267 institutions

36 countries

STEERING COMMITTEE

Chair: Renee Fatemi, *University of Kentucky, USA*

Vice-Chair: Marco Radici, *INFN-Pavia, Italy*

At Large members:

Yuri Kovchegov, *Ohio State University, USA*

Silvia Dalla Torre, *INFN, Italy*

Tanja Horn, *The Catholic University of America, USA*

IB Representative:

Olga Evdokimov, *University of Illinois Chicago, USA*

European Representative:

Daria Sokhan, *Saclay, France / Univ. Glasgow, UK*

International Representative:

Asmita Mukherjee, *Indian Institute of Technology Bombay, India*

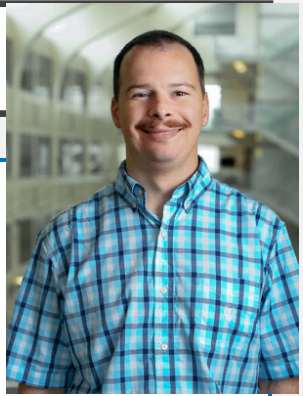
Lab Representatives:

Thomas Ullrich, *Brookhaven National Laboratory, USA*

Rolf Ent, *Thomas Jefferson National Accelerator Facility, USA*

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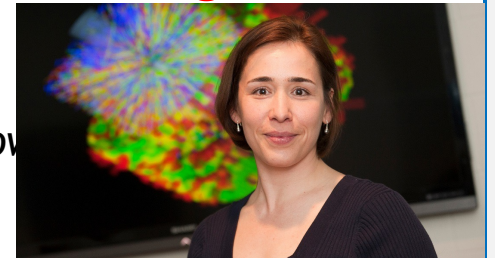
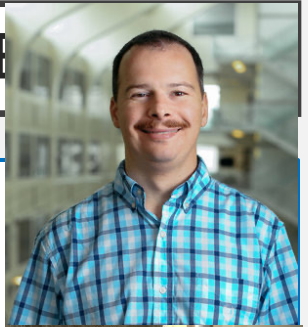
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Lab Representatives:

Thomas Ullrich, *Brookhaven National Laboratory, USA*

Rolf Ent, *Thomas Jefferson National Accelerator Facility, USA*



WORKING GROUPS

Thank you for your service to the EICUG!

SOFTWARE / AI

- Andrea Bressan, *Univ. and INFN of Trieste, Italy*
- Markus Diefenthaler, *JLAB, USA*
- Cristinao Fanelli, *William and Mary, USA*
- Tanja Horn, *Catholic Univ. of America, USA*
- Torre Wenaus, *BNL, USA*

DETECTOR II / IR8

- Sangbaek Lee, *ANL, USA*
- Simonetta Liuti, *Univ. of Virginia, USA*
- Pawel Nadel-Turonski, *Stony Brook Univ., USA*
- Thomas Ullrich *BNL/Yale, USA*
- Anselm Vossen, *Duke Univ, / JLAB, USA*
- Todd Satogata, *JLAB, USA*

COMPUTING COORDINATION

- **Graham Heyes**, *JLAB, USA*
- **Jerome Lauret**, *BNL, USA*
- Andrea Bressan, *Univ. and INFN of Trieste, Italy*
- Wouter Deconinck, *Univ. of Manitoba, Canada*
- Cristiano Fanelli, *College of William and Mary, USA*
- David Lawrence, *JLAB, USA*

THEORY

- Wim Cosyn, *Florida International Univ., USA*
- Anna Stasto, *Pennsylvania State Univ., USA*
- Alessandro Bacchetta, *Univ. and INFN of Pavia, Italy*
- Felix Ringer, *Stony Brook Univ., USA*

COMMITTEES

Thank you for your service to the EICUG!

CONFERENCE & TALKS

- **Michela Chiosso**, *Univ. of Torino, Italy, INFN*
- **Alexey Prokudin**, *Penn. State – Berks, USA*
- Svetlana Barkanova, *Memorial Univ. of Newfoundland, Canada*
- Megan Elizabeth Connors, *Georgia State Univ, USA*
- Qinghua Xu, *Shangdong Univ, China*

DIVERSITY, EQUITY & INCLUSION

- **Taya Chetry**, *Mississippi State Univ., USA*
- Paul Gueye, *MSU, USA*
- Narbe Kalantarians, *Virginia Union Univ., USA*
- Asmita Mukherjee, *Indian Institute of Technology, Bombay, India*
- Sanghwa Park, *Mississippi State Univ. USA*
- Rosi Reed, *Lehigh University, USA*
- Cheuk-Ping Wong, *LANL, USA*

ELECTIONS & NOMINATING

- **Douglas Higinbotham**, *JLAB*
- Adrian Dumitru, *CUNY, USA*
- Bedangadas Mohanty, *NISER, India*
- Cristina Tuve, *Univ. and INFN of Catania, Italy,*
- Charlotte Van Hulse, *Univ. of Alcala, Spain*

CHARTER

- **Richard Milner**, *MIT, USA*
- **Frank Sabatie**, *Saclay, France*
- John Arrington, *LBNL, USA*
- Will Brooks, *USM Valparaiso, Chile*
- Olga Evdokimov, *University of Illinois, Chicago, USA*
- Yuji Goto, *RIKEN, Japan*
- Barbara Jacak, *LBNL & Univ. of California, USA*
- Marco Radici, *INFN Pavia, Italy*
- Sevil Salur, *Rutgers, USA*
- Daria Sokhan, *Saclay, France / Univ. Glasgow, UK*

EICUG CONFERENCE AND TALKS COMMITTEE

- **Michela Chiosso**
- **Alexey Prokudin**
- **Svetlana Barkanova**
- Megan Elizabeth Connors
- Qinghua Xu

Alexey, Michela and Svetlana - thank you for years of hard work, and support for EIC speakers. New members will be announced soon!

1. With the establishment of the ePIC collaboration the scope and role of the EICUG Talks Committee is evolving. The steering committee still thinks it is important to have a EICUG Talks Committee that is independent from a future ePIC talks committee. The SC will look for ways to facilitate and coordinate talks with a future ePIC talks committee.
2. If you are organizing a conference
 - please reach out early to the EICUG talks committee for speakers. It is very difficult to find a speaker within two weeks of a scheduled talk.
 - Please use the eicug-users mailing list to broadly announce your conference. We are **very happy** to promote scientific workshops and meetings. It is important to make general announcements so that the entire community is included and has the opportunity to participate.

EIC INPUT TO NUPECC LONG RANGE PLAN

The Nuclear Physics European Collaboration Committee is an Expert Committee of the European Science Foundation. It provides strategic recommendations to funding agencies and provides a forum for the discussion of future facilities and instrumentation.

<https://www.nupecc.org/>

May 16, 2022 - Marek Lewitowicz issued a call for contributions to the 2023 NuPECC Long Range Planning process.

Call for community input for the NuPECC Long Range Plan 2024

NuPECC is launching the process of creating a new Long Range Plan (LRP) for Nuclear Physics in Europe, identifying opportunities and priorities for nuclear science in Europe, with the aim of publishing the document in 2024. The previous Long Range Plan can be found at <http://nupecc.org/pub/lrp17/lrp2017.pdf> and an assessment of its implementation at http://nupecc.org/2017_LRP_Assessment_of_Implementation_final.pdf.

With the intention of strengthening the bottom-up approach that has always played an important role in its LRPs, NuPECC is opening a call for inputs to the next LRP in form of short (5 page) documents describing the view of collaborations, experiments, or communities on the key topics for the next 10 years to be included in the upcoming LRP. We also solicit new ideas going beyond the topics considered in the LRP 2017 or exploring synergies with the particle physics and astroparticle physics communities and considering new developments such as gravitational waves and multi-messenger astronomy. Contributions related to novel applications in cross disciplinary fields are also welcome.

EIC INPUT TO NUPECC LONG RANGE PLAN

- Contribution from the EICUG SC
"The Electron-Ion Collider -- A U.S.
facility for the European community to
explore the mysteries of the building
blocks of matter."

<https://arxiv.org/abs/2211.02785>

- Contribution from BNL+JLAB
"The Electron-Ion Collider : Exploring
the mysteries of the building blocks of
matter."

<http://eicug.org/content/documents.html>

- Strategy:
 1. European involvement is an important driver of the EIC, but also beneficial for ongoing and planned nuclear physics experiments in Europe.
 2. Outline shared interest about scientific questions and detector R&D between EIC and EU Nuclear Physics communities
 3. Continue and reinforce the scientific and technology activities with strong synergies between the EIC and EU Nuclear Physics projects
 4. Encourage and actively support, where possible, the participation of members of the nuclear physics community in the EIC project.
- Both documents will be reviewed by an ad-hoc NuPECC LRP Steering Committee and serve as input to the final recommendations

EIC WHITE PAPER FOR NSAC LONG RANGE PLAN

The Nuclear Science Advisory Committee (NSAC) provides advice to the US. Department of Energy and the National Science Foundation on the national program for basic nuclear science research. NSAC is currently chaired by Gail Dodge.

<https://science.osti.gov/np/nsac>

This July Tim Hallman charged NSAC to “conduct a new study of the opportunities and priorities for United States nuclear physics research and recommends a Long-Range Plan that will provide a framework for coordinated advancement ...”

<https://science.osti.gov/np/nsac/Reports>

The new NSAC LRP should articulate the scope and the scientific challenges of nuclear physics today, what progress has been made since the last LRP, and the impacts of these accomplishments both within and outside the field. It should identify and prioritize the most compelling scientific opportunities for the U.S. nuclear physics program to pursue over the next decade (fiscal year (FY) 2023-2032) and articulate its potential scientific impact. Further, a nationally coordinated strategy for the use of existing and planned capabilities, both domestic and international, and the rationale for new investments should be articulated. To be most helpful, the LRP should indicate what resources and funding levels would be required, including construction of new facilities, mid-scale instrumentation, and Major Items of Equipment, to maintain a world-leadership position in nuclear physics research. The LRP should also describe the potential impacts and priorities under constant level of effort budgets, 2 percent growth per year using the FY 2022 enacted funding level as a reference.

The extent, benefits, impacts, and opportunities of international coordination and collaborations afforded by current and planned major facilities and experiments in the United States (U.S.) and other countries, and of interagency coordination and collaboration in crosscutting scientific opportunities identified in studies involving different scientific disciplines should be specifically addressed and articulated in the report. Further, the scientific impacts of synergies with neighboring research disciplines and further opportunities for mutually beneficial interactions with outside disciplines should be discussed. The document should also articulate how efforts to promote and sustain a diverse, equitable, and inclusive nuclear science workforce will be fully integrated into every aspect of the vision for the future of U.S. nuclear science.

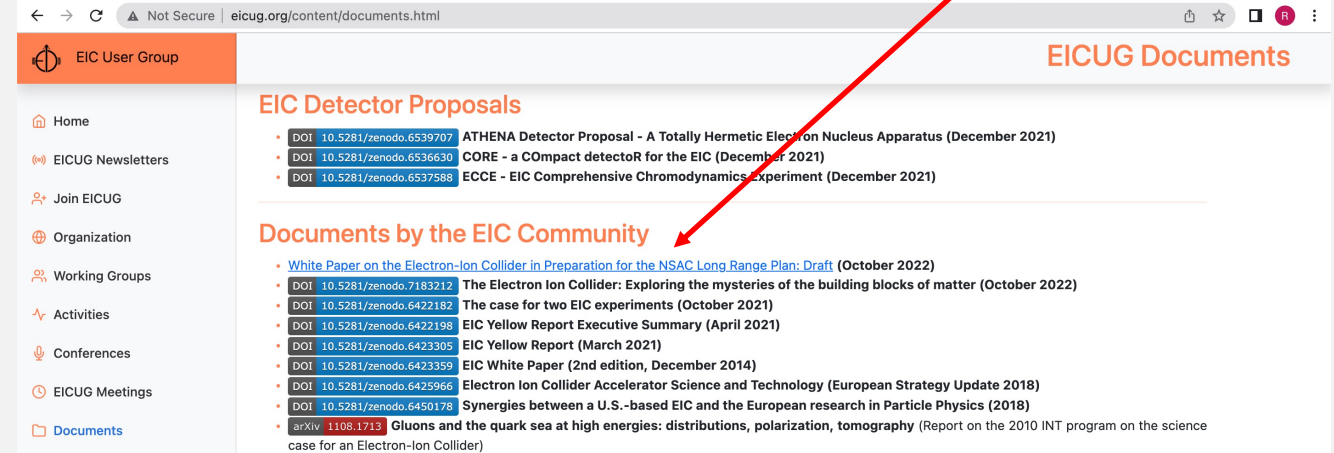
EIC WHITE PAPER FOR NSAC LONG RANGE PLAN

STRATEGY:

1. Executive Summary
 - Allows nuclear physicists that do not work in the area of hot or cold QCD to understand the big picture scientific motivation for the EIC as well as the evolution and status of the effort to date.
 - Should be brief! Currently 4 pages of text, 1 page of figures and 1 page for town hall recommendations.
2. Four chapters that discuss the science motivations, synergy with other programs and areas of nuclear and particle physics, the current design of the EPIC detector, efforts towards a second detector and wider impacts for the community and the country.
 - Start from Yellow Report text, update and condense.
 - Language aimed for nuclear physicists outside of QCD sub-field
 - Provides text, plots and details that will facilitate coordination of priorities across disciplines, for example development of detector technologies or framework for international collaboration.

EIC WHITE PAPER FOR NSAC LONG RANGE PLAN

Polished Draft shared with the QCD Town Hall Conveners and currently posted on the EICUG website:



The screenshot shows the EICUG website with a navigation menu on the left and a main content area. The main content area is titled "EICUG Documents" and contains two sections: "EIC Detector Proposals" and "Documents by the EIC Community". A red arrow points to the first entry in the "Documents by the EIC Community" section, which is the "White Paper on the Electron-Ion Collider in Preparation for the NSAC Long Range Plan: Draft (October 2022)".

EIC Detector Proposals

- DOI 10.5281/zenodo.6539707 ATHENA Detector Proposal - A Totally Hermetic Electron Nucleus Apparatus (December 2021)
- DOI 10.5281/zenodo.6536630 CORE - a COmpact detectoR for the EIC (December 2021)
- DOI 10.5281/zenodo.6537588 ECCE - EIC Comprehensive Chromodynamics Experiment (December 2021)

Documents by the EIC Community

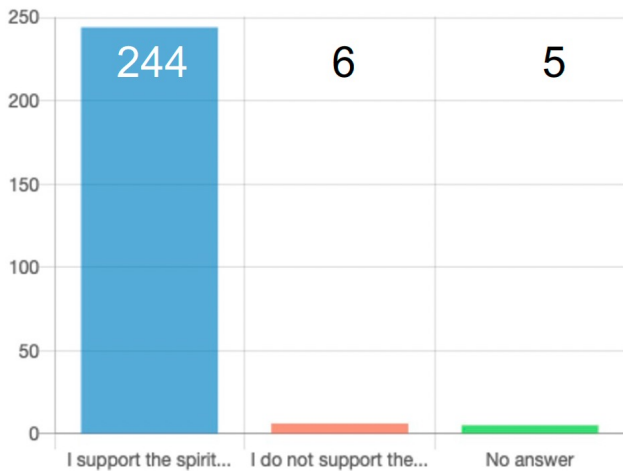
- [White Paper on the Electron-Ion Collider in Preparation for the NSAC Long Range Plan: Draft \(October 2022\)](#)
- DOI 10.5281/zenodo.7183212 The Electron Ion Collider: Exploring the mysteries of the building blocks of matter (October 2022)
- DOI 10.5281/zenodo.6422182 The case for two EIC experiments (October 2021)
- DOI 10.5281/zenodo.6422198 EIC Yellow Report Executive Summary (April 2021)
- DOI 10.5281/zenodo.6423305 EIC Yellow Report (March 2021)
- DOI 10.5281/zenodo.6423359 EIC White Paper (2nd edition, December 2014)
- DOI 10.5281/zenodo.6425966 Electron Ion Collider Accelerator Science and Technology (European Strategy Update 2018)
- DOI 10.5281/zenodo.6450178 Synergies between a U.S.-based EIC and the European research in Particle Physics (2018)
- arXiv 1108.1713 Gluons and the quark sea at high energies: distributions, polarization, tomography (Report on the 2010 INT program on the science case for an Electron-Ion Collider)

Please submit comments and correction via the [google form](#).

We will review and incorporate updates after November 28th and send final document to the LRP writing committee by mid-December.

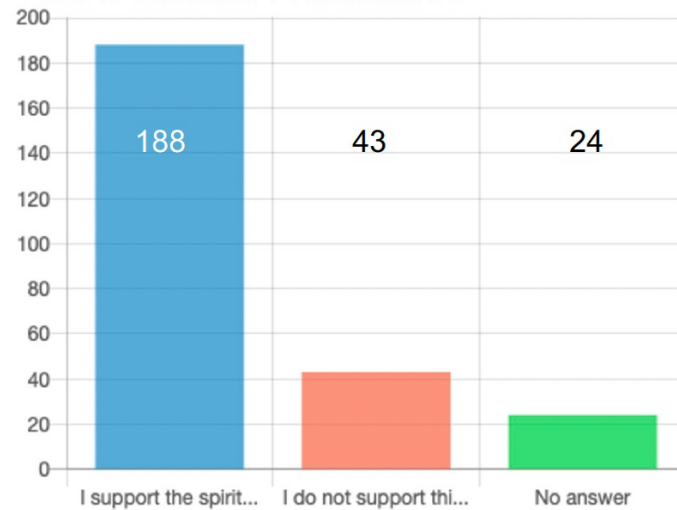
QCD TOWN HALL MEETING

EIC Project

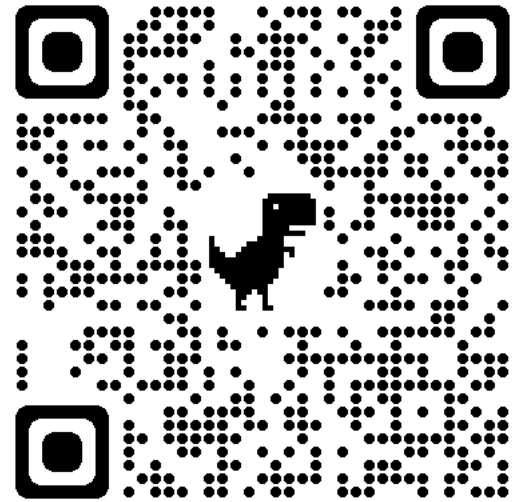


- I support the spirit of this recommendation
- I do not support the spirit of this recommendation
- No answer

EIC Detector-2 Initiative




- I support the spirit of this initiative
- I do not support this initiative
- No answer



The background of the slide is a photograph of the ornate wrought-iron gate of the University of Warsaw. The gate is flanked by classical statues and topped with a crest featuring an eagle. The word 'UNIWERSYTET' is visible on the gate's structure. A white rectangular box with a thin border is centered over the gate, containing the event title. Below the title, a list of details is presented in white text against the dark background of the gate.

2023 ANNUAL SUMMER EICUG MEETING

- **University of Warsaw**

A small red rectangular sign with white text is positioned to the left of the date. It contains the numbers '26/28' and some smaller, less legible text below it.

• July 24-31, 2023

- Format and schedule under development.
 - Plan for early career workshop
 - Adjacent ePIC Collaboration meeting
 - Adjacent Detector II Workshop
- Save the date and Stay Tuned!

[Strong Interactions](#)

New Episode about PDFs with Tim Hobbs!
Will be released November 23.



[My Journey as a Physicist](#)

Interviews with Gail Dodge, Xiaochao Zheng, Bjoern Schenke

