EICUG STEERING COMMITTEE REPORT

Renee Fatemi

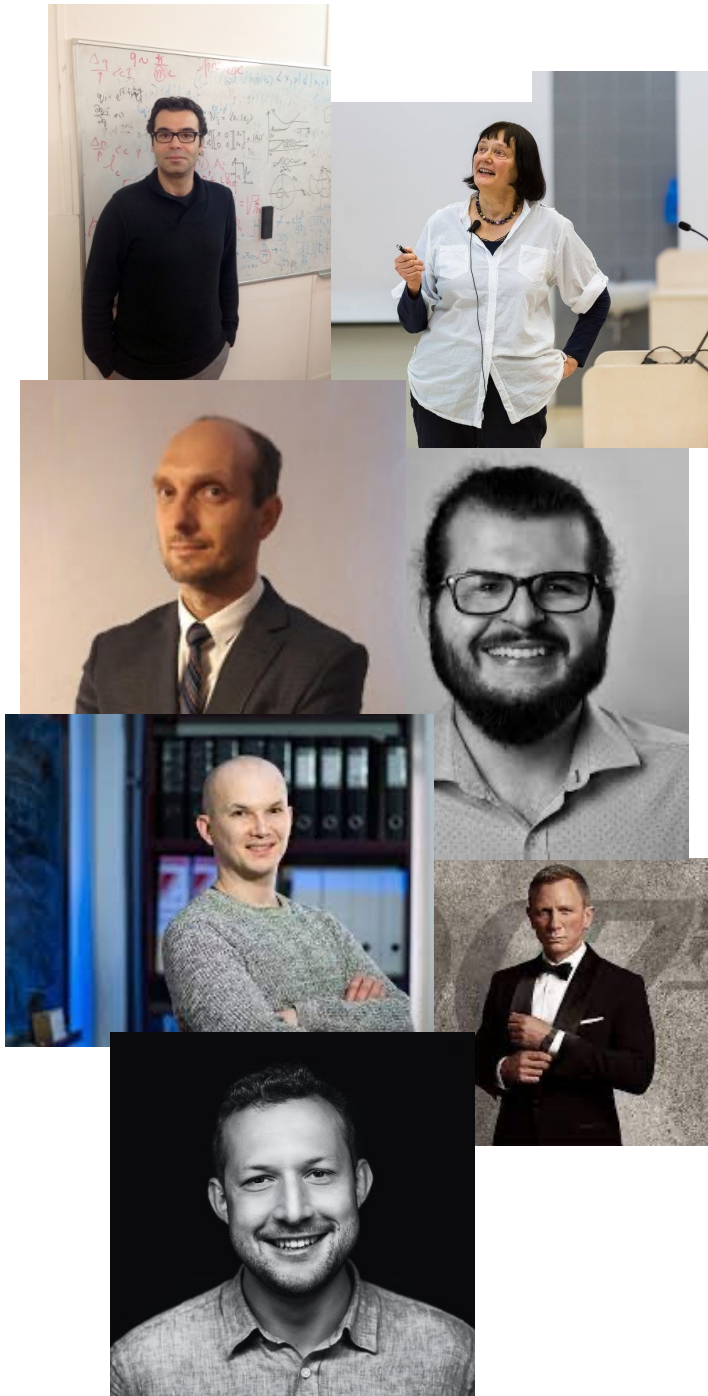
for the EICUG Steering Committee

July 25, 2023

Welcome to Warsaw!

And a huge thank you to the LOC for hosting us and preparing this meeting for us.

- Tolga Altinoluk, *National Centre for Nuclear Research*
- Barbara Badelek, *University of Warsaw*
- Daniel Kikola, *Warsaw University of Technology*
- Mihai Suster, *Candela Foundation, University of Warsaw*
- Pawel Sznajder, *National Centre for Nuclear Research*
- Jakub Wagner, *National Centre for Nuclear Research*
- Piotr Wegrzyn, *Candela Foundation, University of Warsaw*



EIC Users Group

… strong and still growing!

1389 Members
- 857 experimentalists
- 357 theorists
- 160 accelerator scientists
- 9 computer scientists
- 4 support
- 2 other

276 institutions

37 countries

This past year ushered in an exciting new era for the EICUG. The Phase 3 Charter passed late in 2022 & elections were held in June. This combined with the rapid development on the ePIC side means we are in the middle of a busy transition phase.

New Steering Committee Structure

Chair: Marco Radici, *INFN-Pavia, Italy*
Chair Elect: Or Hen, *MIT, USA*
Past-Chair: Renee Fatemi, *University of Kentucky, USA*

Member-at-large:
- Martha Constantinou, *Temple University, USA*
- Tanja Horn, *The Catholic University of America, USA*

International Representative:
- Asmita Mukherjee, *Indian Institute of Technology Bombay, Mumbai, India*
- Marta Ruspa, *INFN-Turin, Italy*

Early Career Representative: Wenliang Li, *Stony Brook University, USA*

ED&I Chair : Alex Jentsch, *Brookhaven National Laboratory, USA*

Lab Representatives:
- Thomas Ullrich, *Brookhaven National Laboratory, USA*
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Strong representation ★ from theoretical community - matches representation in EICUG

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NOTE : EICUG no longer has an Institutional Board.

Past Institutional Board representatives are now institutional representatives and they serve as point of contact to an institution.

Please make sure these representative names and emails are kept up to date.

Working Groups 2022-2023

THEORY

Conveners

- **Alessandro Bacchetta**, *University of Pavia/ INFN*
- **Wim Cosyn**, *Florida International University*
- **Felix Ringer**, Old Dominion University/JIAB
- **Anna Stasto**, *Pennsylvania State University*

SOFTWARE+AI

Conveners

- **Andrea Bressan**, *Unviersity of Trieste/INFN*
- **Markus Diefenthaler**, *Jefferson Lab*
- **Cristinao Fanelli,** *Wiliam and Mary*
- **Tanja Horn**, *Catholic University of America*
- **Torre Wenaus** *Brookhaven National Lab*

COMPUTING COORDINATION

Co-Chairs

- **Graham Heyes**, Jefferson Lab
- **Jerome Lauret**, Brookhaven National Lab

EICUG SWG delegates

- **Andrea Bressan** *Trieste/INFN*
- **Cristiano Fanelli** *William and Mary*

EPIC SWG delegates

- **Wouter Deconinck** *University of Manitoba*
- **Sylvester Joosten** *Argonne National Lab*

DET II / IP8

Conveners

- **Sangbaek Lee**, Argonne National Lab
- **Simonetta Liuti**, *University of Virginia*
- **Pawel Nadel-Turonski**, *Stony Brook University*
- **Thomas Ullrich** *BNL/Yale*
- **Anselm Vossen**, *Duke/JLAB*

Detector

- ***Klaus Dehmelt***, *Stony Brook University*
- **Ernst Sichtermann**, *LBNL*

Physics

- **Charles Hyde**, *Old Dominion University*
- **Bjoern Schenke,** *BNL*

Working Group Charges 2022-2023

THEORY

IB driven initiative to maintain high level of theoretical engagement with EIC effort.

- Provide venue for discussion of new and developing theoretical work relevant for EIC science.
- Theoretical resource for experimental physics efforts.
- Contact point for theorists looking to engage an EIC program

SOFTWARE+AI

Tasked to work on all aspects of EIC software.

- Develop and maintain software tools for physics and detector simulations and reconstruction
- Data and analysis preservation
- Entry point to AI driven applications and algorithms

COMPUTING COORDINATION

Tasked with coordination of EIC Computing efforts.

- Compliance w/ DOE and host lab requirements
- Record of required, available resources and resource usage
- Providing an access point for external resources
- Infrastructure assessment to fold in international computing resources
- Developing in-common data flow and management for EPIC and detector II.

DET II / IP8

Facilitate the development of a unified concept for a general-purpose detector at IR8.

- Develop a portfolio of measurements that are complementary ePIC physics program
- Establish a diverse and vibrant 2nd Detector WG
- Utilize extended design period for Detector II to identify groups that will focus on R&D for emerging technologies

Working Group Charges 2022-2023

Tues 2:30 Anna Stasto	Wed 11:00 Markus Diefenthaler Wed 12:45 Tanja Horn	Wed 10:10 Jerome Lauret	Tues 12:10 Pawel Nadel-Turonski
THEORY	SOFTWARE+AI	COMPUTING COODINATION	DET II / IP8
IB driven initiative to maintain high level of theoretical engagement with EIC effort. • Provide venue for discussion of new and developing theoretical work relevant for EIC science. • Theoretical resource for experimental physics efforts. • Contact point for theorists looking to engage an EIC program	Tasked to work on all aspects of EIC software. • Develop and maintain software tools for physics and detector simulations and reconstruction • Data and analysis preservation • Entry point to AI driven applications and algorithms	Tasked with coordination of EIC Computing efforts. • Compliance w/ DOE and host lab requirements • Record of required, available resources and resource usage • Providing an access point for external resources • Infrastructure assessment to fold in international computing resources • Developing in-common data flow and management for EPIC and detector II.	Facilitate the development of a unified concept for a general-purpose detector at IR8. • Develop a portfolio of measurements that are complementary ePIC physics program • Establish a diverse and vibrant 2nd Detector WG • Utilize extended design period for Detector II to identify groups that will focus on R&D for emerging technologies

Software+AI Group Restructure

MC EVENT GENERATOR ← **SOFTWARE+AI** → ARTIFICIAL INTELLIGENCE

- Continued development of MCEGs needed to realize the EIC science program
- Coordinate between external theory, phenomenology, simulation and software groups such as MCNet and HEP Software foundation.
- Serve as a platform for cross-collaboration between theory and experiment, ePIC and DetII/IP8 and continuing support to the DetII/IP8 WG.
- Organize events to educate and assist the EICUG in utilizing these tools.

Conveners under negotiation

- Develop & maintain connections to the data science community
- Engage with the rapidly evolving AI/ML toolset that will impact the EIC science mission
- Organize events that will assist the EIC community in utilizing AI/ML techniques in all aspects of experimental and theoretical work.

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Conveners being identified

Thank you Andrea, Markus and Torre for your service to the EICUG.

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Transition of CCG to ECSJI

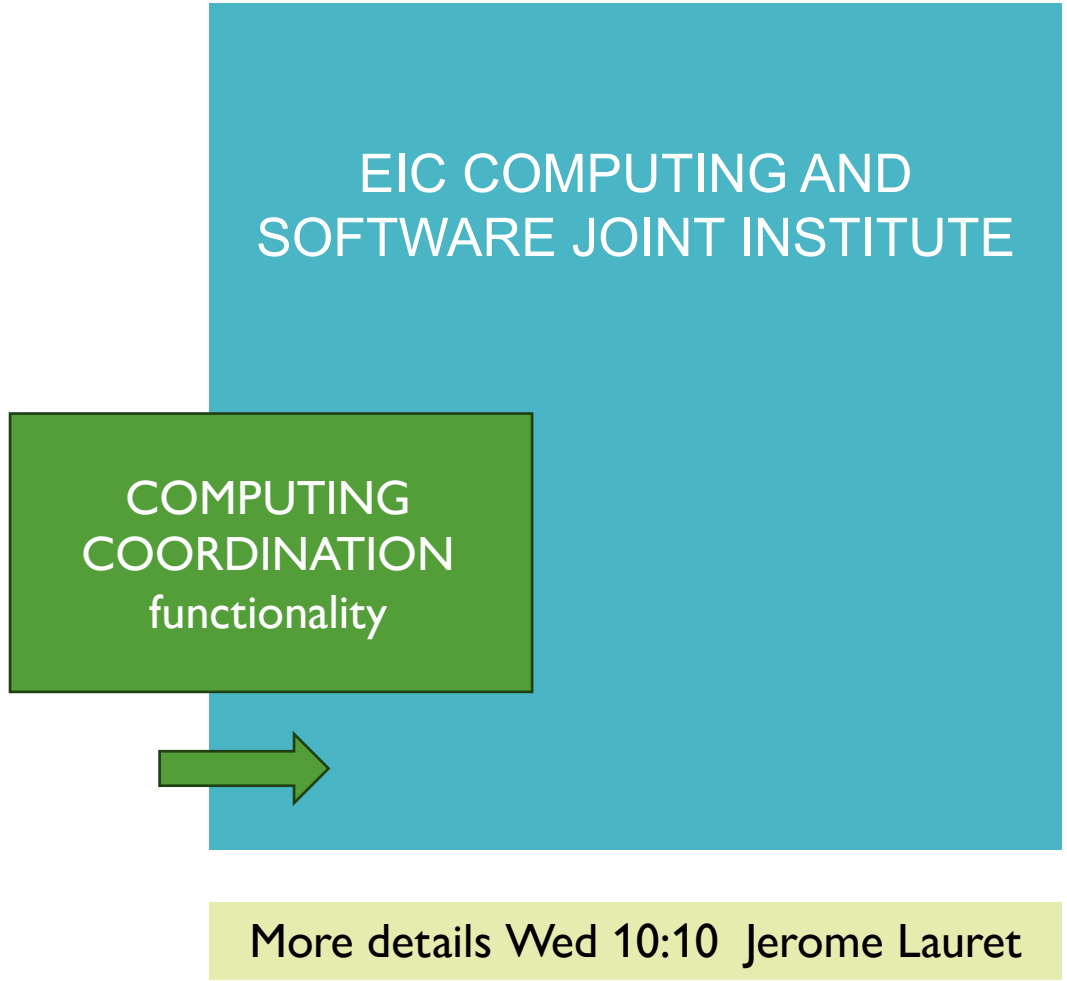
The computing coordination group was created to make sure the EICUG had the necessary resources for the detector proposal phase following the Yellow Report.

It was always envisioned that the structure and responsibilities would be revisited in early 2023, after ePIC was formed and the governance structure defined.

This new structure will be the ***EIC Computing and Software Joint Institute.*** A charter is being drafted by the host labs and ePIC management and will go into effect at the start of the fiscal new year.

The points of contact for this new structure and any computing infrastructure and computing conversations :

- Amber Boehlein (JLAB)
- Eric Lancon (BNL)



More details Wed 10:10 Jerome Lauret

Committees

Elections and Nominating Committee

- Chair : Cristina Tuve (Univ. of Catania, INFN)
- Members
  - Adrian Dumitriu (CUNY, USA)
  - Bedangadas Mohanty (NISER, India)
  - Insert your name here!
  - Insert your name here!

Doug Higinbothan and Charlotte Van Hulse have completed their term and are rotating off. The SC will be recruiting two new members.

Charter Committee

Phase 3/4: January 2020 - current

- Richard Milner (MIT, USA) (Co-chair)
- Franck Sabatié (Saclay, France) (Co-chair)
- John Arrington (LBL, USA)
- Will Brooks (USM Valparaiso, Chile)
- Olga Evdokimov (Univ. of Illinois, Chicago, USA)
- Yuji Goto (RIKEN, Japan)
- Barbara Jacak (LBNL & Univ. California at Berkeley, USA)
- Marco Radici (INFN Pavia, Italy)
- Sevil Salur (Univ. Rutgers, USA)
- Daria Sokhan (Univ. Glasgow, UK)

Under Phase-3, Charter Committee is invoked, by the past-chair, once a year to review charter.

Thank you for your service to the EICUG!

Committees

Conference and Talks Committee

- Co-chair : Megan Connors (Georgia State University)
- Co-chair : Qinghua Xu (Shandong University)
- Members
  - Nicole D'Hose (IRFU, CFA, Univ. Paris-Saclay)
  - Andrea Signori (Univ. of Turin)

Co-chairs Megan and Qinghua are rotating off now. One of the two new chairs will be a member in common with the similar Committee in ePIC, which is currently being formed.

Diversity and Inclusion Committee

- Chair : Alex Jentsch (BNL)
- Past Chair:
- Members
  - Paul Gueye (Michigan State University)
  - Sanghwa Park (JLAB)
  - Rosi Reed (Lehigh University)
  - Cheuk-Ping Wong (LANL)

New structure for ED&I Committee follows same chair line as SC. Taya Chetry served as the last chair and has asked to step down. SC will soon solicite nominations for the remaining four positions and they will be chosen to ensure diversity.

Thank you for your service to the EICUG!

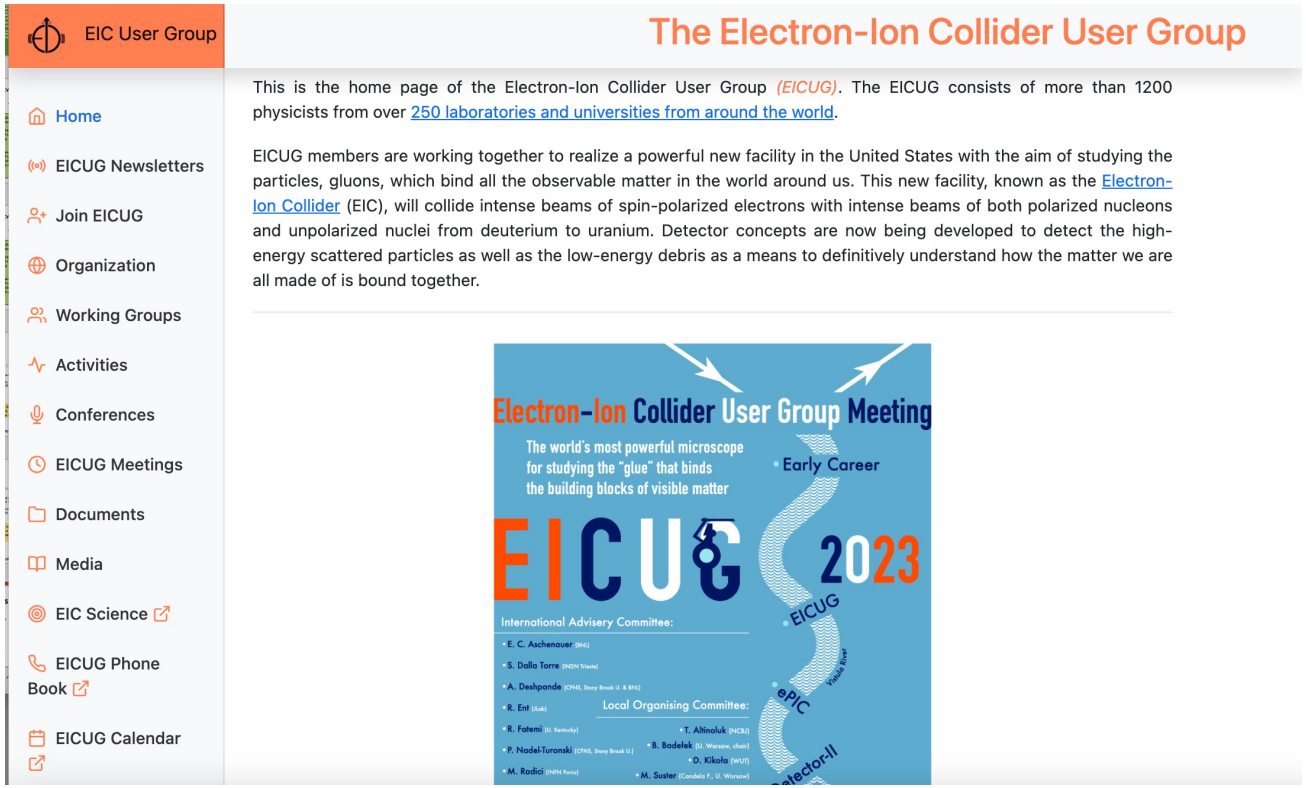
EICUG “Infrastructure”

Keeper of the EICUG Mailing lists
- Maxim Potekhin

EICUG Webmasters
- Wouter Deconnick
- Vladi Skokov

Master of the EIC Phonebook
- Rachel Nieves

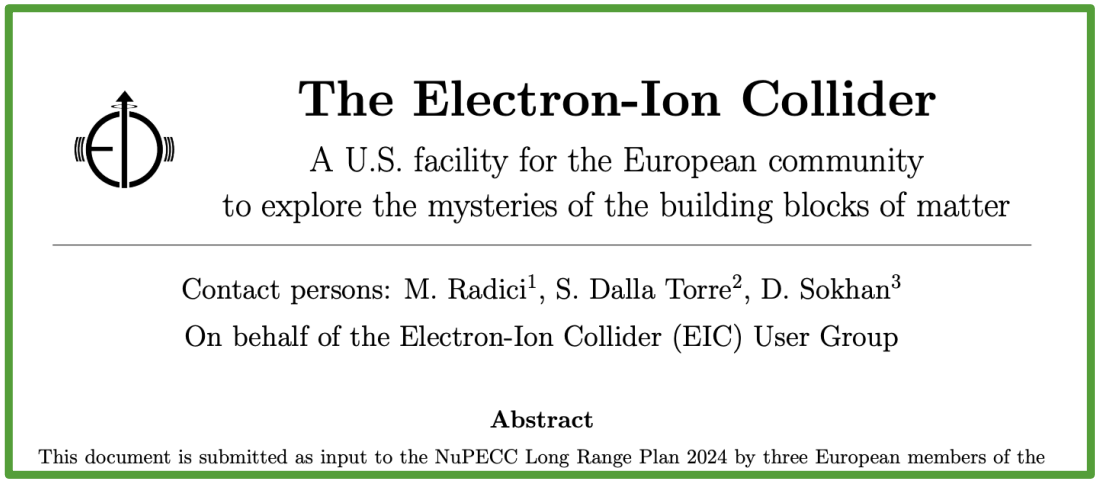
Thank you for keeping things up and running and putting out fires at short notice.



As the transition to Phase-III settles there will be many updates to the website.

Long Range Planning Process

The nearly simultaneous kick-off of the US and European long range planning process required writing several documents.



The Electron-Ion Collider

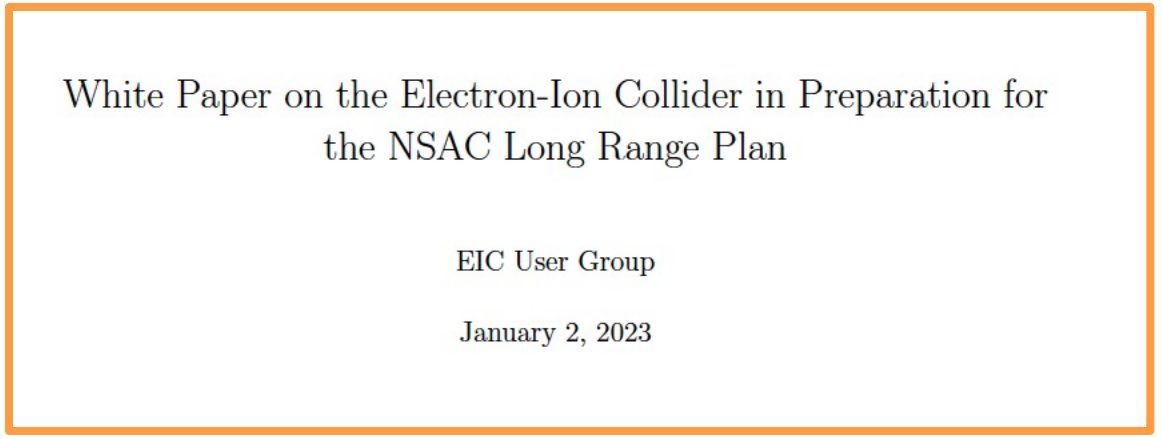
A U.S. facility for the European community
to explore the mysteries of the building blocks of matter

Contact persons: M. Radici[1], S. Dalla Torre[2], D. Sokhan[3]
On behalf of the Electron-Ion Collider (EIC) User Group

Abstract

This document is submitted as input to the NuPECC Long Range Plan 2024 by three European members of the

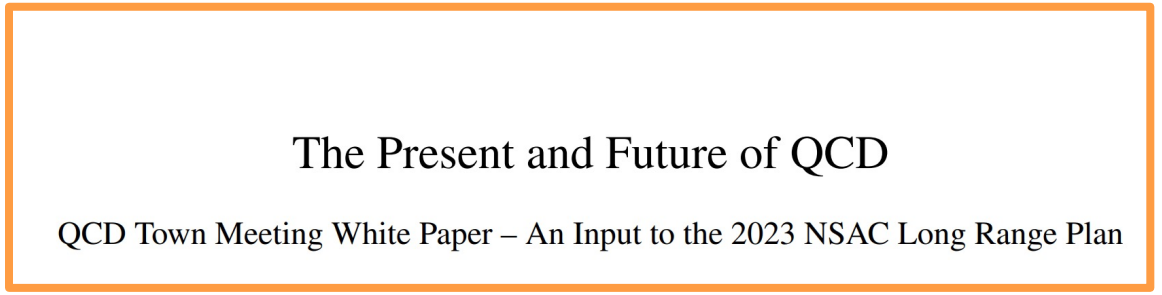
Wed 9:20 M. Radici



White Paper on the Electron-Ion Collider in Preparation for the NSAC Long Range Plan

EIC User Group

January 2, 2023



The Present and Future of QCD

QCD Town Meeting White Paper – An Input to the 2023 NSAC Long Range Plan

Wed 9:00 R. Fatemi

Additional EICUG SC Activities:

EICUG Fly-in Day on the Hill

- Held in person on April 25th - more effective than virtual meetings.
- Reasonable turnout from community, but it is critical to restore attendance to previous numbers.
- Need to find a way to support travel of users, perhaps more coordinated effort with BNL and JLAB?

- Podcast about the physics that drives the EIC.
- Developed and produced by ***Maria Zurek*** and ***Markus Diefenthaler***
- New episode features interview with Martha Constantinou - coming soon!

STRONG INTERACTIONS

STORIES STRAIGHT FROM THE HEART OF MATTER

https://www.stronginteractions.org/

2024 EIC Annual Users Meeting

- Several very attractive and competitive applications to host the next Users Meeting.
- Decided to follow the tradition of alternating between inside and outside of United States.
- 2024 will be at Lehigh University, hosted by Rosi Reed.
- Located in Bethlehem, Pennsylvania, due west of NYC. It is conveniently located within 75 miles of several airports on the east coast. (Newark, Philadelphia)
- Dates are still be discussed - stay tuned!

Quick reminder of the ground rules

- Listen respectfully without interrupting
- Commit to learning, not debating
- Criticize ideas, not individuals
- Meeting chairs please be mindful of all participants and facilitate a variety of responses, questions and comments
- Speakers work with the organizers to load talks before your session.

Thank you for coming.

We are very happy to see you again!

Best wishes for a productive meeting.