

Hall C Business Meeting



Hall C SC

Carlos Yero
Dave Gaskell
Debaditya Biswas
Dien Nguyen
Dipangkar Dutta
Garth Huber
Maria Niculescu
Mark Jones

The nomination cycle for the Hall C Steering Committee is now open for 2 positions.

- **Position responsibilities:** Committee members work along with Jefferson Lab and helps taking decisions on
 - organize the January and June Hall C meetings
 - Monitoring and making recommendations on major Hall C User issues including the user use and operation of the Hall C instrumentation and analysis software.
- Term start date: [September 1st, 2026](#)
- Service term length: [3 years](#)
- To be considered please send your nomination (or self-nomination) by email: [Before 11:59 pm June 30, 2026](#).
- Submit the nomination by email to : Ioana Niculescu < ioana@jlab.org > &/or Deb Biswas < biswas@jlab.org >
- Committee will Contact nominees later for very short bio and a brief statement.



Hall C User Group: Working Group Updates

17th June 2026

Spectrometer Performance and Future Upgrades – Stephen Kay

We've had two Quarterly Analysis Meetings since the previous Hall C meeting -

<https://hallcweb.jlab.org/doc-private/DisplayMeeting?conferenceid=45> - September last year
- DocDB was being very odd so I need to chase up the files for this

<https://hallcweb.jlab.org/doc-private/DisplayMeeting?conferenceid=46> - February this year -
The recording of this one is stuck into limbo unfortunately due to an unprofessional exchange at the end of the recording.

I'd initially hoped to schedule another last month but due to a lot of scheduling clashes I wasn't able to. More broadly, due to a lot of ePIC related commitments I haven't been able to devote as much time to Hall C as I would like, including organising the analysis meetings. As such, if anyone is willing to either take over or help out on this front that would be much appreciated! – Stephen Kay

AI4HallC Working Group – Tanja Horn

Timeline of AI-ML Activities at JLab (Hall C)

Nov 2022: AI4HallC Kickoff meeting (<https://indico.jlab.org/event/607/>)

identified **needs in the Hall C science output workflow** (spectrometer setting, data acquisition, detector monitoring, design, calibrations, online/offline analysis, etc.)

list of **applications where AI/ML may assist and optimize** this workflow.

Dec 2022: 2nd AI4HallC meeting (<https://indico.jlab.org/event/670/>)

follow up on the two action items: 1) The highest priority is to **define the parameters for the high-level Hall C operations** (optics, equipment, operation) and therefore for Hall C as precision hall. Once parameters are defined need to collect data for Hall C, e.g., beam positions, magnet parameters, target. 2) In parallel, the **uncertainties** that come into high level global physics analysis in Hall C have to be defined.

Feb 2024: 3rd AI4HallC meeting (<https://indico.jlab.org/event/831/>)

ongoing efforts from the community were presented (computer vision techniques, LLMs, and unsupervised learning applied to Hall C data; initial implementation of Hydra in Hall C).

Hands-on examples

AI4HallC Working Group – Tanja Horn

Timeline of AI-ML Activities at JLab (Hall C)

June 2024 -: HYDRA offline data analysis for NPS and other Hall C experiments

Sept 2025 - : NPS SRO Machine Learning Project (<https://jeffersonlab.github.io/nps-sro-ml/>)

This project applies Graph Neural Network (GNN) methods to streaming-like data for physics analysis, focusing on clustering and classification of signal over background in the NPS (Neutral Particle Spectrometer) detector.

Dec 2025 -: **Interpretable AI for the Structure of Matter: Physics-Informed Learning and LLM-Augmented Discovery in Hadron Physics**

This project proposes a novel interpretable artificial intelligence (AI) framework, integrating physics-informed machine learning and large language models (LLMs), to uncover the internal structure of hadrons directly from data

6 Feb 2026: 4th AI4HallC meeting (<https://hallcweb.jlab.org/doc-private/DisplayMeeting?conferenceid=47>)

Community efforts towards including AI/ML into the Hall C science output workflow

Model Analysis of NPS towards SRO

Toolkit for online data processing in streaming readout CODA

Introducing HYdra for data quality monitoring

Augmenting LLMs with Domain Knowledge

10 July 2026: 5th AI4HallC meeting (planned) — Look out for emails with further details

NEW

Modernizing SIMC Working Group

A new WG was recently proposed by Dave Gaskell to modernize SIMC, the current Hall C fortran based Monte Carlo simulation software, to a more modern, accessible language. The proposal was approved by Hall C SC.

Conveners: Gabriel Niculescu & Sanghwa Park

Wiki page: https://hallcweb.jlab.org/wiki/index.php?title=SIMC_Modernization

Please contact the WG conveners if interested in joining.

Look out for emails about first meeting and further details



Discussion