

Application for Full Membership - Stuart Fegan

Status

My first period of CLAS membership was from 2008 until 2014, spanning my PhD studies at the University of Glasgow on strangeness photoproduction in the g9 experiment, and a postdoc position with INFN Genova. In the latter, I was involved with the development of the Forward Tagger and pathfinder analysis for the MesonEx experiment, collaborating extensively with colleagues in Glasgow and Edinburgh.

Subsequent employment opportunities led to my departure from the collaboration, but I remained connected to the wider JLab program and was able to rejoin CLAS as a limited member in 2017 through the George Washington University, formalising my role in supporting the g9 analysis of one of our then students.

I have been in my current position at the University of York since late 2019, returning to term membership of CLAS shortly thereafter, resuming several pieces of unfinished business, including MesonEx and my own g9 analysis, which is now in review. I am currently a core postdoc on the group's primary funding grant, a role intended to maintain specific experience and expertise in a research group; in this case my experience of the JLab program, with its heavy CLAS emphasis. York has substantial interest in future CLAS projects, seeking to apply detector technologies we're working on for the EIC and other experiments to the current CLAS 12 GeV program, and investigating the possibilities of a 22 GeV upgrade, efforts in which I am already playing a part.

Commitments and plans

- Carried a significant proportion of York's CLAS12 shift undertaking, previously served as Run Coordinator during RG-C and have made myself available for future Run Coordination in the upcoming run period.
- Active in analyses of both MesonEx and RGM data
- Member of the CLAS Speakers' Committee since 2023, serving as alternate representative for the Software Working Group.
- Previous involvement in efficiency studies of the TOF systems, alongside two York students, and have recently taken over responsibility for FT electron efficiencies from a now-graduated York student.
- Inherited responsibility for the Rootbeer framework from Glasgow, which enables analysis of CLAS6 BOS and DST files independently of CLAS6 software. Adding this package to the CLAS6 container.
- Intend to continue g9 strangeness photoproduction analysis, using the CLAS6 container to perform the necessary simulations to enable measurements of target-recoil polarisation observables and realise a "complete experiment".
- Seeking to develop new analysis tools in support of spectroscopy analyses, applying previous experience with longitudinal phase space plots in GlueX to MesonEx and Very Strange analyses.
- Led and participated in several initiatives supporting ECRs in CLAS. As postdoc, my academic ranking is ECR even if my age isn't, and I am keenly aware of the challenges of maintaining a career in times of uncertain funding and project timelines slipping beyond contract endings.