

# Nuclear Physics Summer School 2024

Organizers - David Sharp and Rachel Montgomery

Durham University 11<sup>th</sup> -24<sup>th</sup> August 2024



Science and  
Technology  
Facilities Council



NatWest



**IOP** | Institute of Physics  
**Nuclear Physics Group**



Young Researcher Meeting Grant



# The venue

## Collingwood College

(Additional rooms in T&L spaces)

41 attendees in total

26 STFC

2 EPSRC

3 Self-funded

8 Industry/university/government sponsor

2 Industry participants

Numbers down on expectations from a pre-registration round (conferences, experiments...)



# The venue - A return to Durham 25 years later



Courtesy of Paddy's lecture slides

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# Lectures

Lectures gave an overview on broad range of topics. Hadron physics, EIC, ALICE, nuclear structure and astrophysics, nuclear theory, instrumentation and applications.

Lecturers from various career stages from UK and international institutions.

5 F and 9 M lecturers - 42% of lectures delivered by female academics.

Lectures supported with tutorials (PDRAs) – note we had no female PDRAs!

Holly Szumila-Vance	JLAB/FIU, USA	Hadron physics
Jamie Norman	Liverpool	ALICE
Sean Freeman	CERN/Manchester	Single-particle structure
Gianluca Colo	Milan	Nuclear theory
Magda Zielinska	CEA Saclay, France	Collective structure
Iain Moore	JYFL, Finland	Ground-state properties
Anne-Cecille Larsen	Oslo, Norway	Nuclear Astrophysics
Charlotte Van Hulse	U of Alcala, Spain	EIC
Chantal Shand	UKAEA	Neutron spectroscopy
Paddy Regan	Surrey/NPL	Metrology
Stefanos Paschalis	York	Instrumentation
Robert Mills	NNL	Environmental Applications
Robert Harding	NHS	Medical Physics
Stephen Ashley	Sellafield	Nuclear Decommissioning

# Student talks

Student talks were presented each evening.

Standard was exceptionally high. Tutors had a very difficult job each week deciding on the best 1<sup>st</sup> and 2<sup>nd</sup> year talk.  
(prizes split into weeks due to rotating tutor teams)

1<sup>st</sup> year prizes: Max Conroy (Birmingham) and Jack Hughes (Liverpool)

2<sup>nd</sup> year prizes: Refilwe Setso (York) and Alex Smith (York)



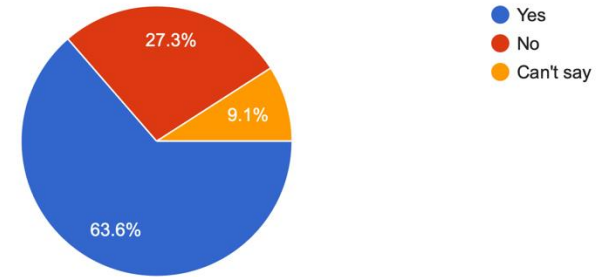


# Project skills 3.1/5 (17/23 scored 3 or higher)

Students were allocated into groups and tasked as a team with building a radiation detector set up using small CsI detectors and Arduinos. The focus is on developing team working and project planning and implementation skills.

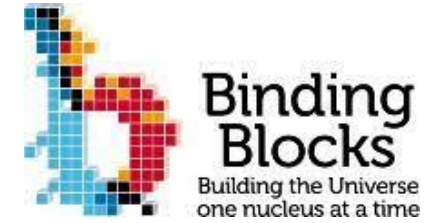
Had to give a 5-minute presentation on project planning and outcomes with prizes for best outcomes and project management.

Following these sessions do you have a better awareness of project management skills?  
22 responses



# Public engagement training 3.4/5 (16/22 3 or higher)

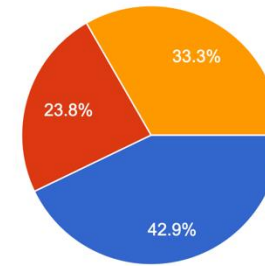
Training on communicating research to broader audiences. The sessions involved an introduction to PE, followed by interactive communications activities in small groups. The students were introduced to the Binding Blocks suite of resources and challenged to develop content relating to their own research. The sessions were delivered by Katherine Leech and Christian Diget.



10-hundred-word challenge  
1-page summary of research  
Prize for Cloe McGeorge (Tracerco)

10 students registered interest to become active as mentors for BB outreach activities moving forward

Did it inspire you to get involved with outreach in any way?  
21 responses



● Yes  
● No  
● Can't say



# Leadership and well-being 3.5/5 (15/20 3 or higher)

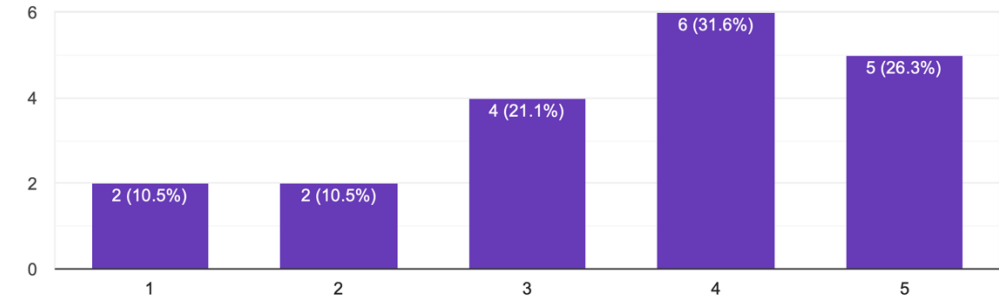
Session focussed on styles of leadership and wellbeing during PhD. Delivered by Robin Henderson (My Consultants company) based on materials developed for Prosper – researcher development initiative led by Liverpool (involving Manchester and Lancaster as well in second pilot).

Linked to project skills and what leadership styles students themselves had used.

*“Surprisingly good session”*

Did you feel the sessions on leadership and wellbeing was a good use of your time during the school?

19 responses

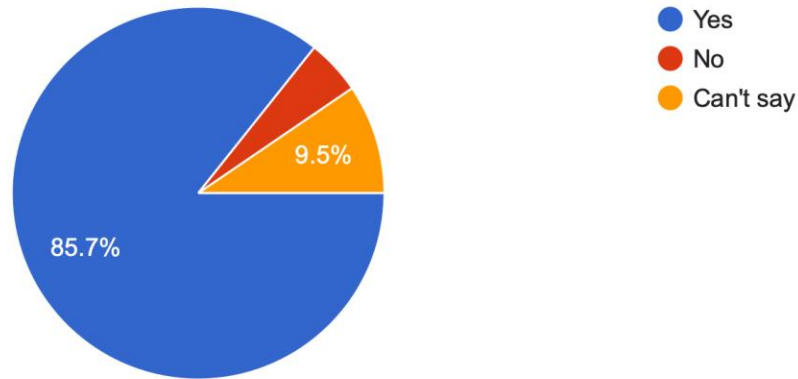


# Careers event 4.7/5 (21/22 4 or higher)

Panel session followed by careers-fair-style event with former PhD students at various career stages invited to speak to participants about experiences of a variety of career paths.

Do you have a better appreciation of how your PhD skillsets match to different careers?

21 responses



- Stephen Ashley (Surrey)
- Katie Garrett (Manchester)
- Conor Hamill (Edinburgh)
- Rob Harding (York)
- Eilidh Henderson (Glasgow)
- Seonaid Hume (currently at Strathclyde)
- Sarah Lonsdale (Edinburgh)
- James Parkin (Surrey)
- Daniel Pitman-Weymouth (Manchester)
- Mark Procter (Manchester)
- Chris Ricketts (Manchester)
- Adam Tuff (York)



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# Funding – still finalising financial report

- STFC provided up to £93,803k. Accommodation, lecturers, room hire, admin etc
- EPJ £1k.
- NUPECC £750 Reducing fee for non-STFC or self-funded participants.
- IOP £4k.
- Industry £5k. (Mirion, Tracerco, Rapisan Systems Ltd, AWE, Natwest). Project skills equipment, social events, sports, prizes.

# Summary

Summer school was a success (at least from the organisers point of view).

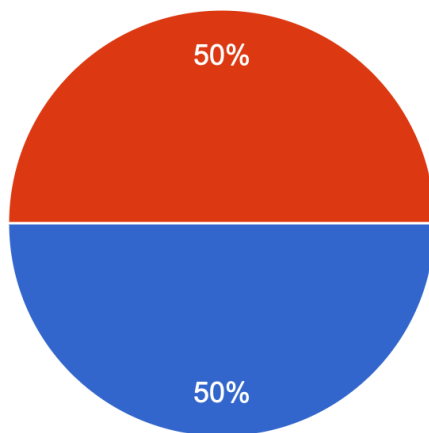
Many new things attempted – much to feedback to next organisers

Maybe needed another full rest day for a start!

Not just delivery of content but big part of the school is cohort building.

Overall, did the summer school meet your expectations?

22 responses



- Met expectations
- Exceeded expectations
- Didn't meet expectations

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Leicester 2009



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**Aim to identify next organiser before winter community meeting – get in touch if interested.**

Full survey results from STFC still to come.