

Astronomy & Physics Education Celebration

Welcome all!



Today



Time	Detail
1300	Welcome Dr Nicolas Labrosse and Dr Peter H. Sneddon Co-Chairs of the APE Group
1305	The Story So Far: The First Five Years of the Astronomy & Physics Education Group Dr Peter H. Sneddon
1320	Exploring the Potential of Interactive E-books for Enhancing Learning and Teaching in Physics and Astronomy Dr Rosaria Lena



Today



Time Detail	
Examples of APE Students' Work	
Computational Physics as a Tool for Learning Physics	Victoria Arbour
Investigating student perceptions of skill development in Physics, Astronomy, and Astrophysics degrees	Poppy Bennett
Improving Teamwork and Communications skills for Physics 1 Students through Collaborative Outreach Posters	Elise Graham
What Changes, What Lasts: Exploring Generative AI in STEM Learning	Fay Haryani
Perceptions of Physics and Physicists in UK Higher Education	Lauren Muir



Today



Time Detail
Expanding the mental self-image of undergraduate Physicists: Ethics, coding and context for the discipline Dr Sam Skipsey
1455 Break
1510 Learning physics in the age of Generative AI
Professor Ross Galloway, University of Edinburgh
The future of APE and SOTL including Lightning-format pitch for collaboration projects Led by Dr Nicolas Labrosse
1630 End





Astronomy & Physics Education Group: The First 5(-ish) Years

Dr Peter H. Sneddon

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Our original purpose ... (Autumn 2019)



- To develop a culture where scholarship is as valued, and valuable, as all other areas within the School of Physics & Astronomy.
- APE welcomed anyone with a desire to create the best possible learning experience for our students.
- APE would provide a structure of support for all its members, and anyone else with an interest in striving to get the best out of their learning and teaching.
- APE would support its members to disseminate good practice and to share innovations



It all began at ...





Launch Event:

1300-1630 Wednesday 9th September 2020

On-Line

All welcome!



Carrying out PER/SoTL



- Staff have actually had the time to carry out PER!
- Supervising a wide range of undergraduate projects focussed on PER/SoTL
 - These allowed APE staff to make progress in our areas of scholarship interest;
 - Provided opportunities for students to work on open-ended projects around education and student support;
 - Some of these students have gone on to pursue postgraduate study / work in related fields: we have been able to support PhD students working in the PER field.
 - Some have received prizes at national conferences after presenting their posters.
- Have a look around you ...



Support within the School



- Introduced dedicated training for ...
 - New lecturers and tutors
 - New class and lab heads
 - New demonstrators
- Big Panda/Wee Panda Mentoring
 - Peer-mentoring scheme
 - Experienced students mentor less experienced students
 - Growth in confidence, belonging, inter-personal skills and well-being
- Teaching Practice Moodle
 - A venue for the sharing of best practice

- Regular L&T Seminars
 - Speakers from across the world (Strathclyde, Edinburgh, Leeds, London, Ireland, Norway, US) covering a diverse range of PER/SoTL topics
- Education and Inclusivity Reading Group
 - Looking at latest developments in the literature.

Support outside of the School



- Advanced Higher Physics Assignment Support Scheme
 - In 24-25 we helped 38 pupils from 12 schools across Glasgow and the West
 - In 25-26 we have bookings already for 32 pupils from 6 schools (and we only started last week!)
- Physics For All Mentoring
 - Launching 25-26
 - Targeted at pupils from deprived backgrounds studying for Higher Physics
 - A combination of
 - On-line tutorials run by senior undergraduates
 - School visits by mentors and
 - Campus visits by students to see what a university is like, as well as get up close to cutting edge physics and physicists



Outreach events & Conferences



- Quantum Technology School
 - Annual two-day outreach event that brings close to 300 pupils and teachers from across Scotland to Glasgow to
 - Experience cutting edge physics
 - Meet current undergraduates
 - Take part in hands on workshops
 - Find out what a campus looks like
- IOP Girls Into Physics
 - Host two day-long workshops that show S2/3 girls some of the applications of physics
 - Send teams to further workshops around Scotland.
- VICEPHEC21
 - UK's largest Chemistry/Physics Education conference run with colleagues from the School of Chemistry.