



Annual Report

13 December 2016

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## INTRODUCTION – VISION AND GOALS

The University of Exeter chapter has been working around two main objectives:

The first of these is to promote science to a non-specialist audience, most commonly pre-university students, organising visits from local schools and actively participating in different outreach events for the general public.

The second is strengthen links with other UK/EU based SPIE Student chapters. In this year we attended an event host by Southampton SPIE chapter and sent one of our members to an event organised by St Andrews SPIE student chapter. Close future plans include collaborating with ICFO chapter in Barcelona and again with Southampton. Furthermore, we will be inviting all UK-based SPIE chapters to the event we are organising in March thanks to the SPIE travelling lecturer programme.

## STUDENT CHAPTER MEMBERS

Committee members are elected at the AGM held in Exeter's Spring Term. The current (2016-17) committee were elected on 25<sup>th</sup> February 2016. Our current committee members are as follows:

<b>Position</b>	<b>Name</b>	<b>e-mail Address</b>	<b>SPIE membership #</b>
President	Alba M. Paniagua Diaz	<a href="mailto:amp220@exeter.ac.uk">amp220@exeter.ac.uk</a>	3642663
Vice President	Tom Collier	<a href="mailto:Tpc207@exeter.ac.uk">Tpc207@exeter.ac.uk</a>	3714466
Secretary	Kishan Menghrajani	<a href="mailto:Km508@exeter.ac.uk">Km508@exeter.ac.uk</a>	<b>3713251</b>
Treasurer	Ben Hogan	<a href="mailto:Bh341@exeter.ac.uk">Bh341@exeter.ac.uk</a>	3717591
Outreach	Erick Burgos Parra	<a href="mailto:Eb487@exeter.ac.uk">Eb487@exeter.ac.uk</a>	3758450
Officer	Joe Wahab	<a href="mailto:jw542@exeter.ac.uk">jw542@exeter.ac.uk</a>	3645894

Our non-officer student chapter members are (as of 13-12-16)

Lauren Barr  
Christopher Beckerleg  
Joaquin Faneca  
Henry Fernandez  
Santiago Garcia-Cuevas Carrillo  
Jayesh Goyal  
Christopher King  
Vicky Kyrimi  
Pablo Martinez Pancorbo  
Rayko Stantchev  
Tanveer Ahmad Tabish  
Liam Trimby  
Peter Karlsen  
Benjamin Gray

Total number of members: 19

Our faculty advisor is Prof. Paul Reynolds (email: [p.reynolds@exeter.ac.uk](mailto:p.reynolds@exeter.ac.uk))

## ACTIVITIES

- **Trip to Norman Lockyer Observatory**

In December 2015, the chapter organised a trip to the Norman Lockyer Observatory, located near Sidmouth, just outside Exeter. This event was open to members and non-members of all ages, as an enjoyable and educational outreach activity. During the visit, the attendees had the opportunity to learn about the history of the observatory and the man behind its name. Everyone enjoyed a private tour of the several telescopes on site, watched as meteors were detected in real time, and finished off the evening watching the stars above; unfortunately the night was overcast, so the stars were provided by the state-of-the-art planetarium the observatory boasts! The trip was a huge success, and another has been planned for next January 2017.



- **Coffee Morning Social**

Spie chapter organised a coffee social in the Senior Common Room open to everybody in the Physics Building, with the aim of getting our chapter known, invite people to coffee and biscuits while talking about benefits of becoming a member of SPIE and encouraging them to join.

- **School visit to the University**

We contacted two local primary schools and ask the teachers to raise questions about light, along with the students. After they submitted them to us, we selected the best ones and invited these students to the university and solved their questions with experiments in which they could also take part on. After the day, we invited the students to Liquid Nitrogen Ice-cream we made with them. The event was a success, both students and teachers really enjoyed the day, as well as SPIE volunteers, so we are planning on doing it again this coming year. The number of students coming was 18.



- **SPIE – May Mad Presentations**

As previous years, SPIE decided to contribute their fun event in the form of a presentation skills competition for some lecturers of the faculty. In the weeks leading up to the occasion chapter members were asked to compile a few presentation slides on a topic of their choice – the more obscure the better! Entries included themes such as, “The world of Pokemon”, “Meaning of Utopy” and “Human magnetism” A handful of brave staff members put themselves forward to randomly select one of these presentations without having ever seen it before, and present it to a room full of their students and colleagues. The crowd then voted for their favourite Mad Presentation by cheering the loudest, and the winner was awarded with a carefully selected trophy. With plenty of biscuits and laughs all round, this endeavour proved to be one of the most memorable of the year!



- **Dartmoor camping and stargazing**

Also in May 2016 SPIE chapter organised a camping trip with telescopes and binoculars to a nearby Natural Park, Dartmoor. Provided with camping equipment, many SPIE members camped in a spot of this park and had fun stargazing in a particularly clear night. Everybody had great fun there, so we will be repeating this again. The number of attendants was 15.



- **SPIE Social BBQ**

To celebrate the summer weather in UK we organised a BBQ social with SPIE members, using this opportunity to catch up and gather all together, discuss next events over a friendly, fun and relaxed atmosphere. The number of attendants was 18.



- **Southampton Industry day invitation**

In June 2016 Southampton chapter hosted an industry day with the SPIE speaker David Giltner and invited our chapter to their event. A total of 8 SPIE members attended this well organised event. Apart from the talks, they showed us their labs, clean room and we all had the chance to discuss our research posters with them and all attendants during an enjoyable lunch. We found it really interesting and we will be running a similar one in March 2017. We will be inviting them to our event as well.

- **The Big Bang South West**

The Big Bang South West was held on Wednesday 29th June 2016. The event was hosted by the University of Exeter in collaboration with the Devon Education Business Partnership. The event is the largest celebration of science, technology, engineering and maths for young people in the UK. It is attended by 1,700 students aged 7-19 years from schools in the South West.

The Exeter SPIE student chapter hosted a stand throughout the event to show a number of different optics experiments. Children, parents and teachers were able to interact with the crew at the stand by asking questions about the demonstrations and trying out the experiments, thereby deeply engaging them with exciting physics at hand in a fun and interactive way.



- **Sidmouth Science Fair**

After the Big Bang Fair in Exeter, SPIE was contacted by Sidmouth Science Fair organisers to take part in their Science Fair on 15<sup>th</sup> October 2016, to run a similar outreach stand to engage kids with optics and photonics experiments and spread optics to young minds. 6 of our members attended the event in Sidmouth having a great time with people there. A total number of attendants was approximately 1000 to the whole event.



- **Biophotonics North conference collaboration**

During 2<sup>nd</sup>-3<sup>rd</sup> November St Andrews SPIE chapter hosted a conference in their university to which we decided to collaborate. We sent a member to help them in the organisation, logistics and taking part of the event. This is a nice way of getting more insight on the kind of events we can run and also is a great chance to networking with different chapters across the UK.



- **Institute Of Physics Exeter outreach**

On Saturday 26<sup>th</sup> November four of our members attended an outreach event organised by the IOP in the University of Exeter. This event had different physics workshops and outreach demonstrations intended for the general public and SPIE was in charge of the optics section in the outreach stands. Total approximate number of attendants was 800.



- **Movie & Pizza social night**

On Friday 2<sup>nd</sup> December SPIE organised a movie and pizza social to gather all members before leaving for Christmas, as an end-of-year social event. We all enjoyed the night watching “Whiplash” in the Common Room in the Physics building.



## FINANCES

Event	Description	Income	Expenditure
Grants and Funds	2016 SPIE funding	£607.08	
	Carried forward from 2015	£217.06	
Student lecture series	Refreshments		£2.50
Recruitment coffee morning	Refreshments		£5
School visit	Marshmallows & ice cream ingredients		£25.23
	Parking costs		£12
Dartmoor trip	Travel costs		£67
Mad presentations	Prize and biscuits		£28.43
Barbeque social	Food and charcoal		£21
Equipment	Gazebo for outreach events		£22
Student chapter leadership conference	Poster		£20
Southampton industry day	Transport costs		£109.08
Sidmouth Science Festival	Refreshments for demonstrators and transport costs		£23.50
Pizza night social	Food and drink		£44.08
Total		<b>£824.14</b>	<b>£379.82</b>

Closing balance:        **£444.32**

## OUTLOOK

Planned events:

- *Norman Lockyer Observatory and Planetarium trip 2017.* Last year we organized a trip to a local observatory. It was a great success and thus we are organizing it again in early 2017. Hopefully we have a clear night sky this year.
  
- *Student lecture series #2.* We have decided that an easy way to give current students a chance to improve their presentation skills is to start a monthly 'lecture' type series where people volunteer to give 20 min presentations on a general science topic or their own research. We ensure the event is adequately advertised.

- *Primary schools experiments day 2017.* Following this year event and the success of it, we want to repeat it, inviting different schools this time. The aim is to give an opportunity to allow young school students, aged between 7 and 13, to perform experiments that investigate the nature of light using the equipment in our university.
- *Run a Professional Development Workshop in March with the Traveling Lecturer Program.* We have already contacted Alaina Levine to give a workshop day about professional development, like what to do after the PhD, what opportunities are out there, etc. The idea is to widen the view of all our members about our future, potential opportunities after graduating.
- *Send an officer to Optics + Photonics.* We have asked current members if they would like to travel to one of the available conferences and, more importantly, their reason for wanting to go and how they hope this would benefit the chapter. We currently have 3 applicants, all of which want to go to *Optics + Photonics*, and the committee is currently in the process of deciding who to select.
- *Run outreach event in the city centre and at local fairs in the area.* We have been bringing optics to schoolchildren that come to university events, but we want to expand these limits and take it to the street, where we can reach a greater range of members of the public.