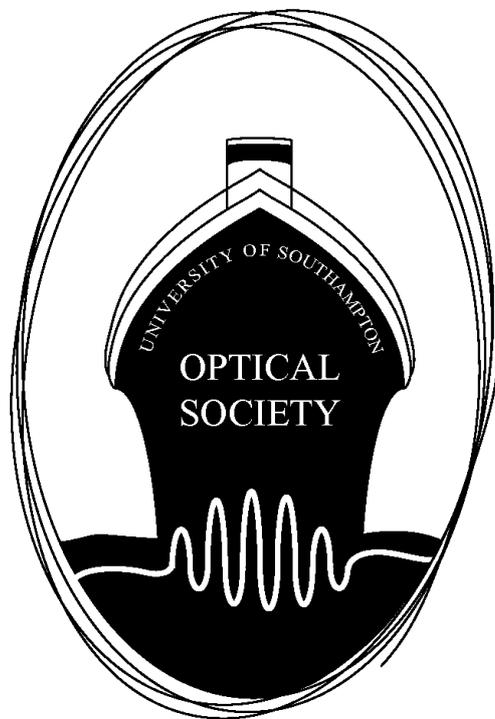


SPIE



Student Chapter

University of Southampton



Annual Report

March 2011 - February 2012

The University of Southampton SPIE Student Chapter

Introduction – Vision and goals

The University of Southampton SPIE student chapter was established on the 28th January 2011. The student chapter also has affiliations as an Optical Society of America (OSA) student chapter and a European Physical Society (EPS) Young Minds local section. Collectively, we are known as the University of Southampton Optical Society Student Chapter. Our members are mostly PhD students from the Optoelectronic Research Centre at the University of Southampton (United Kingdom), but also have members from other departments as well as undergraduates.

Our objective is to unite and engage the student community who are performing (or are interested in) optics and photonics research at the University of Southampton. Our activities can be categorised into three main groups:

- Social and networking activities
- Educational activities
- Outreach

Chapter committee members

Committee members are elected at the beginning of the academic year. The current committee members (October 2011-September 2012) are:

<u>Position</u>	<u>Name</u>	<u>Email</u>
President	David Wu	dsw1g10@orc.soton.ac.uk
Treasurer	Armen Aghajani	aa15v07@orc.soton.ac.uk
Secretary	Alberto Sposito	as11g10@orc.soton.ac.uk
Lightwave directors (outreach)	Jonathan Maddock	jsm2e11@orc.soton.ac.uk
	Zhihong Li	zl3g10@orc.soton.ac.uk
First year representatives	Asiri Obeysekera	aibo1v07@orc.soton.ac.uk
	Sam Crabb	sc19v07@orc.soton.ac.uk
	Alexander May	arm103@orc.soton.ac.uk
	Qiongyue Kang	qk1g11@orc.soton.ac.uk

Our faculty advisor is Prof. Johan Nilsson (email: jn@orc.soton.ac.uk).

Student Chapter members

Our current non-officer student chapter members are:

Evangelos Atmatzakis
Lewis Carpenter
Amol Choudhary
Rafal Cieslak
Peter Cooper
Jae Daniel
Matthew Eckold
David Gray
Yi Liao
Ee Leong Lim
Di Lin
Shen Lz
Ning Ma
Paolo Mennea
Eric Rodrigue Numkam Fokoua
Lorena Pinilla
Jan Junis Rindermann
Helen Rogers
Chaotan Sima
Niccolo Somaschi
Jakub Szela
Khaled Taha
Jingyu Wang
Xin Yang Jianfa Zhang

Activities

The student chapter has been very active over the last year organising numerous events which involve both the students and staff at the Optoelectronics Research Centre. We have maintained our reputation as a socially active student chapter through student focused activities (e.g. pub crawl, laser-tag) as well as activities which encourage networking with members of staff and academia (Spring formal, pub quiz). Our outreach program, the Lightwave Roadshow, reached a record number of children, including a three day trip to the 2011 British Science Festival held in Bradford, UK. Our educational activities were also highly successful which included a field trip to Bletchley Park, the World War II British code-breaking centre.

Social Activities:

- Coffee and cake club (Regular event, fortnightly)
- Laser tag (April 2011)
- Spring formal (May 2011)
- International food day (June 2011)
- Pub quiz (July 2011)
- Welcome party for new students (October 2011)
- Winchester fireworks (Bonfire Night, November 2011)
- Arctic BBQ (November 2011)
- International festive food day (December 2011)
- New Year pub quiz (January 2012)
- Winchester pub crawl (February 2012)

Social Highlights:

Spring Formal (May 2011)

In 2011, the student chapter hosted its first formal dinner. It was held on board the Princess Caroline (cruise ship) which sailed along the River Solent in Southampton. All students and staff within the department were invited and it was attended even by senior academics. The total number of attendees was 92. The evening began with a formal dinner and was followed by a magic show and dancing. The spring formal was enjoyed by all and was a highly successful event overall, which we hope will become a student chapter tradition.



The 2011 Spring Formal on board the Princess Caroline on the Southampton Harbour

Arctic BBQ (November 2011)

The arctic BBQ is an annual student chapter held near the beginning of the academic year and is traditionally used to encourage the new students to become members of the OSA. This was held at a local pub, with the student chapter providing (and cooking) the food. The new students get a chance to socialise with other members of the community and the event is a key networking opportunity at the beginning of their PhD degrees. This was the first arctic BBQ held as a joint SPIE chapter and hence the new students were also encouraged to become SPIE members. The event was attended by approximately 60 people and we were able to increase our SPIE membership roster to 34 members.



The 2011 Arctic BBQ

New Year Pub Quiz [SPIE funding received] (January 2012)

The Pub Quiz is another regular event which is usually run twice a year. The pub quiz is another social event which staff and students from the entire faculty (Optoelectronics, Electrical engineering and Physics) are invited to attend. Food and drink is provided by the student chapter, and the quiz is hosted by our former student chapter president. This provides a key networking opportunity as chapter members can interact with other departments in a fun and (slightly) competitive environment. This interaction can encourage

potential future collaborations and is also a chance to advertise the student chapter to these other departments.



The New Year Pub Quiz

Educational Activities

Field trip to Bletchley Park, Milton Keynes, United Kingdom (June 2011)

The student chapter embarked on a field trip to Bletchley Park, the secret British code breaking site during the Second World War. The purpose of this trip was to learn about a scientific field outside of optics and photonics. We were shown the historic sites, replica code-breaking computers and learnt the basics of code-breaking. A minibus was hired to transport the 15 attendees from Southampton to Bletchley Park.



The field trip to Bletchley Park

Second year talks (September 2011)

This is another annual event where the second year PhD students give conference style presentations about a scientific topic outside of their own research. All students and staff in the department are invited as audience members and also act as judges. Scientific topics outside the students' own research are required, so as to improve the audience's understanding of the current state of scientific research across a broader number of fields. The presentations are given in a conference style (12 minutes presentation + 3 minutes question time) to provide practice for real conferences in a less intimidating atmosphere. The students are judged by the audience on their presentation skills and the winner is awarded a travel grant (funded by the Optoelectronics Research Centre) towards a conference of their choice.

Outreach Activities

Lightwave is our outreach program designed to provide an exciting, interactive and educational experience of optics for children aged 5 to 11 years old.

The Lightwave ambassadors, volunteer PhD students from our student chapter, try to develop the children's awareness, knowledge and general interest in optics by demonstrating and supervising the use of equipment that is designed to allow the children to gain a hands-on experience of science. Some of the topics covered include: communications using light (including optical fibres), optical illusions, lenses, electromagnetic radiation and the human eye.

The directors contacts schools showing an interest in Lightwave. This includes making initial contact and providing information about the activities and equipment. The directors then schedule the shows for suitable dates, finding transport for equipment and ambassadors, recruiting sufficient volunteers and managing the event. The directors talk to all chapter members about Lightwave to promote awareness and encourage participation.

Lightwave has been an active outreach program for a number of years, however last year we were able to reach a record number of children (approximately 2200). This was achieved by increasing the number of schools we visited which also included non-local schools.

We also participated in two large scale events. The University of Southampton Science and Engineering Day is a day where the university is open to children and their parents, demonstrating a range of science and engineering activities. We were offered a room to set up the Lightwave roadshow, which we estimate over 250 children visited. We also participated in the 2011 British Science Festival, a national event where schools from across the country are invited to attend. This was held in Bradford with an estimated 600 children visiting over the three days.

The Lightwave program is funded by the Optical Society of America Youth Education Grants and an SPIE activity grant.

List of schools visited (number of children):

- Sherbourne House School (144)
- University of Southampton Science and Engineering Day (250)
- Robert Mays School (80)
- Walsh Junior School (120)
- Romsey Abbey Primary School (120)
- Bishopstoke Brownies (80)
- Court Moor School (80)
- Portswood Brownies (20)
- Great Binfield School (90)
- Fairfeild School (120)
- Westfields School (80)
- Walsh Junior School (90)

- Princes Hall (90)
- Southampton 2nd Brownies (20)
- British Science Festival, Bradford (600)
- Various home schooled children (20)
- Houndsdown School (100)
- Townhill Junior School (120)



The Lightwave team setting up for the 2011 University of Southampton Science and Technology Day.



Teaching the girls at Bishopstoke Brownies about light and optics.

Finances

Opening Balance		£ 1,928.18	
Event	Description	Incoming funds	Expenditures
Coffee and Cake			
	Coffee beans		£ 40.40
Spring Formal			
	Ship		£ 250.00
	Drinks, Food, decorations		£ 342.50
	Ticket Sales	£ 170.00	
	Magic Show		£ 100.00
Lightwave Outreach			
	OSA youth education grants	£ 597.13	
	University of Southampton funding	£ 172.29	
	British Science Association Festival reimbursement	£ 268.94	
	SPIE Activity Grant	£ 178.26	
	Equipment maintenance		£ 61.27
	Travel costs		£ 172.29
	Science festival expenses (hotels, travel, food)		£ 546.61
	Lunch provisions		£ 165.35
Imperial College OSA chapter visits Southampton OSA chapter			
	OSA grant	£ 142.33	
	Travel costs, lunch		£ 158.45
Miscellaneous			
	OSA recruitment contest award	£ 113.71	
Arctic BBQ			
	Food		£ 247.51
	OSA grant	£ 179.54	
International food day			
	Reimbursement for ingredients		£ 106.70
International festive food day			
	Reimbursement for ingredients		£ 99.83
Pub quiz			
	Drinks and food (summer)		£ 114.77
	OSA Grant	£ 142.15	
Welcome Party			
	Food and Drinks		£ 178.02
	OSA Grant	£ 179.54	
Pub Quiz (New Year)			
	SPIE Grant	£ 118.84	

	Food and Drinks		£ 137.65
Bletchley Park Field Trip			
	Travel costs		£ 93.24
	OSA Grant	£ 89.70	
	TOTAL	£ 2,352.43	£ 2,814.59
	Closing Balance	£ 1,466.02	

Outlook

The University of Southampton Student Chapter will continue to remain an active student society. We will continue with our traditional events over the next year including the popular social and networking events such as the Arctic BBQ, Pub Quiz, International Food Day and the Winchester Pub Crawl. We hope to establish the formal as a new traditional event by running it again this year, most likely in the spring or summer.

We hope to maintain our excellent performance in our Lightwave outreach program. However, after the mammoth effort in 2011 it is unlikely to be sustained due to volunteer fatigue. Despite this, we do have several schools already booked in over the next three months. We will also be participating in the University of Southampton Science and Technology Day in March.

Another scientific interest field trip will be taken this year with the destination narrowed down to either the Central Laser Facility in Oxfordshire or a trip to the Natural Science and Science Museums in London. We do hope to expand our educational efforts by inviting a travelling lecturer to the University of Southampton. We are currently organising an OSA travelling lecturer and if successful we will also arrange for an SPIE travelling lecturer in the future.

Being a relatively new SPIE student chapter (as compared to our OSA affiliation), we are still learning what the SPIE can offer us and are trying to increasing our involvement with SPIE. We hope to send an officer to the SPIE student leadership workshop and Optics and Photonics conference. When the new academic year approaches, we will hope to continue increasing the number of SPIE student members from Southampton.

We are looking forward to the next year and are confident it will be another successful one for the University of Southampton Optical Society Student Chapter.