



University of Cambridge SPIE Student Chapter Report for Reinstatement

1. Introduction

2. Election of new officers

3. Future activities

4. Future development

5. Appendix – SPIE student member and Officer responsibility

August 2nd, 2016

1. Introduction

The University of Cambridge SPIE student chapter was established by Department of Engineering on October 31st, 2002. After some time, the chapter was probated due to lack of enough student members. Since then, this chapter has been dormant for quite a long time. Now Cambridge has reached the edge of recovering the chapter with more than 10 student members, most of which come from Cavendish Laboratory. Here, after a month preparation, we request to reinstate the chapter, which will be based in Cavendish Laboratory with Dr. Sarah Bohndiek acting as the advisor.

As a world-leading university, Cambridge performs cutting-edge research in the interdisciplinary fields of optics and photonics, from the basic material properties and the novel optical devices, to various applications including optical communication, imaging and sensing. In the last year, a number of researchers from Cambridge presented their research in SPIE conferences (including West Photonics and Optics+Photonics) and interacted vividly with the SPIE community. On the other hand, we find that the interaction between researchers in Cambridge, especially PhD students, is far from sufficient and really need a platform for their communication and socialization. Therefore, we would like to reinstate the Cambridge SPIE Student Chapter. The aim of this chapter is to unite and support the students who are performing optics and photonics related research in Cambridge and to expose them to the wider academic and industrial community outside Cambridge on one hand and to increase the public awareness of optics and photonics, especially next-generation scientists, on the other hand.

We are pleased to have Dr. Sarah Bohndiek from Cavendish to act as the advisor of Cambridge SPIE student chapter. Dr. Sarah Bohndiek is an University Lecturer in Biological/Biomedical Physics (Cavendish Laboratory) and Fellow at Corpus Christi College (Cambridge, UK). She also leads the VISION laboratory operated jointly between the Department of Physics and the Cancer Research UK Cambridge Institute. Dr. Sarah is an active regular member of SPIE and active participator of SPIE community.

A new committee with 7 officers were elected on July 28th for the coming academic year. Various activities are scheduled, including recruiting new members, public outreach activities (Cambridge Science Festival and Physics at Work), academic activities (monthly journal club and speaker series) and social activities (summer BBQ and happy hours). We hope our members would broaden their knowledge and develop their friendship through these activities.

We are also thinking of sustainable development of the chapter. We want to gain support from Cavendish Laboratory and Department of Engineering for our activities and young researchers. Also, we hope to have more interaction with OSA student chapter to unite the limited resources to maximize our influence.

2. Election of new officers

Considering the large loads of our activities, we plan to set up 7 officer positions as follows. The committee is elected in May and serves between October 1st and September 30th next year.

Due to the reinstatement, we had a meeting and election on July 28th with the new officers.

Our current committee members are as follows:

Position	Name	e-mail address	SPIE membership #
President	Jiangbin Zhang	Jz400@cam.ac.uk	3743063
Vice-president	Arfa Karani	ahk36@cam.ac.uk	4000432
Secretary	Arya Thampi	at720@cam.ac.uk	4000659
Treasurer	Shahab Akhavan	sa766@cam.ac.uk	3746476
Webmaster	Qifei Gu	gg215@cam.ac.uk	4000415
Outreach	Dale Waterhouse	djw93@cam.ac.uk	3701381
Membership/Social	Han Qin	hq217@cam.ac.uk	4000644

Advisor: Dr. Sarah Bohndiek (seb53@cam.ac.uk), Cavendish Laboratory

3. Activities

Type	Name	Time
Daily Running	Chapter Meeting	Once a month
Recruitment	CUSU Fresher's Fair 2016	October 4-5
Chapter interaction	Exeter Chapter Visit	October
Public Outreach	Cambridge Science Festival	March
	Physics at Work	September
Academic Activity	Journal Club	Once a month
	Speaker series	Every term one speaker
Social Activities	SPIE Happy Hour	Every three months
	BBQ	July

Chapter Meeting

Chapter meeting is to be held every month. We will discuss our progress in the past month and make arrangements for our activities in the next month.

CUSU Freshers' Fair 2016

CUSU Freshers' Fair is the biggest event in the freshers' calendar in Cambridge. Over 400 sports and societies will attend and publicize themselves. In this year, it will take place at October 4th 10:00 to October 5th 17:00 in the Kelsey Kerridge and Parker's Piece. The deadline for the stall booking is August 4th. The price for the standard stall (3FT) without electricity is £40.

We plan to attend it with a publicity poster to publicize our new organization. We will provide some refreshments and candies for people visiting our place. The new committee will make the detailed plan to make it successful. We hope to attract as many people as we can to write down their email addresses so that we can forward our activity information to them.

Exeter Chapter Visit

Alba Paniagua Diaz, President of University of Exeter SPIE Student Chapter, has contacted us to organize a trip to Cambridge in October and would like to meet members of our chapter. We are still discussing the possibility of organizing small event/activities. This will benefit both chapters and increase the chapter interaction in UK.

In the future, we would like to visit Southampton Chapter to learn how they manage and maintain the student chapter.

Cambridge Science Festival

The Cambridge Science Festival provides the public with opportunities to explore and discuss issues of scientific interest and concern and to raise aspirations by encouraging young people to consider a career in science, technology, engineering or mathematics.

Each year, the Festival welcomes visitors to hundreds of events and receives extensive national and local media coverage. Over 170 event coordinators organise talks, interactive demonstrations, hands-on activities, film showings and debates with the assistance of around 1,000 staff and students from departments and organisations across the University and research institutions, charities and industry in the eastern region. In addition, over 150 people volunteer their time to act as stewards to ensure visitors have a safe and enjoyable Festival experience.

We would like to attend this event in March, 2017 with outreach kits from SPIE and also buying some demonstration to show how the light has changed our life. This would be our first outreach activity and all the committee

Website: <http://www.sciencefestival.cam.ac.uk/>

Journal Club

We aim to start a student-led journal club, which has been an anchor for our chapter. Once every month students will get together over lunch to discuss one or more interesting journal articles in the field. There will be a student session leader who will have chosen the journal article(s) and who will facilitate the discussion. Lunch will be provided. We will continue to hold these regularly throughout the year. These sessions will not only keep the students apprised of important research in their fields but also allow students from various different photonics backgrounds in different university departments to share their own knowledge and teach each other about their respective areas.

Physics at Work

“Physics at Work” is a three-day event that aims to stimulate interest and encourage wider participation in physics amongst 14- to 16-year-olds by showcasing the many and varied ways in which physics is used in the wider world.

The Physics at Work Exhibition runs over three days, with two sessions on each day. Each half-day session has a capacity for about 450 students. This event is centred approximately 25 exhibitors, and is held at the Cavendish Laboratory in Cambridge. Each exhibit usually consists of a short presentation, practical demonstrations, an opportunity for hands-on involvement and time for asking questions. Some of the exhibitors are from Research Groups within the Cavendish Laboratory and the others are from industry, including companies such as Rolls-Royce Plc., Domino Printing Services and The Technology Partnership.

University of Cambridge SPIE student chapter is based in Cavendish Laboratory and this would be a fantastic opportunity for our chapter to introduce children the broad field of optics and photonics to increase their awareness. We will attend this activity in September next year with some support from SPIE and Cavendish.

Website: <http://outreach.phy.cam.ac.uk/programme/physicsatwork>

SPIE Happy Hour

In order to enhance the connections between committee members as well as society members, it is suggested to held short-time get-together at least once every three month and we call it happy hour. It is a one-hour session because most of the committee members shall be busy with their own research, and one-hour session may help to relax and communication with each other for progress updates and else. The one-hour session will be around the campus for convenience purpose, such as Cavendish lab or west cafe based.

BBQ

Barbeque is one of the most welcome active over England but weather depends of course. The BBQ will be held at the end of each term for all the society members and small fee will be charged for financial purpose. The reason of holding BBQ is to create more communication and discussion opportunities between society members under an informal circumstance. The date of BBQ will be emailed to all members at least two weeks in advance however the last minute notice about cancellation or modification is possible due to the unpredictable weather in UK.

The whole committee will be collaborative to plan and in charge of the BBQ activity not only for saving money but also to making it more interesting to be a memorable time.

Speaker Series

We plan to invite a visiting lecturer in the SPIE Lecture Directory to enthusiastically begin the speaker series. Following their lead, we then plan to invite several other speakers within Cambridge and from other universities, who can speak both towards technical and broad audiences, covering fundamental optics research, applications, and career advice in the optics field. These events will be designed to be part technical and part career-oriented consisting of a talk followed by an informal question and answer session and social gathering with the speaker where members and the speaker can continue to discuss matters of interest. These events will give the students an opportunity to learn about some of the interesting work going on in the field and also let the invited speakers have an idea about what the young minds in the field are planning for the future.

4. Future development

1. Close collaboration with OSA Student Chapter

OSA student chapter in Cambridge was established several years ago. In order to better integrate the resource and to further increase our influence as a whole, we would like to have close communication with OSA student chapter and invite them to hold the activities together. In the future, we would like to discuss the possibility of merging two student chapters into a bigger society.

2. Support from Cavendish Laboratory and Department of Engineering

Currently, most of the student members are in Cavendish Laboratory (Department of Physics) and Department of Engineering. Most of the activities are based in Cavendish thus we also would like to apply for some funding support from these departments.

Appendix – SPIE Student Members

Current members

Sola Ajiboye

Shahab Akhavan

Muhammad Akmal Bin Kamarudin

Yuanbo Deng

Richard Hall

James Joseph

Deyan Levski

Abraham Ogunyinka

Michal Tomaszewski

Robert Wallis

Dale Waterhouse

Ben Woodhams

Jiangbin Zhang

Qifei Gu

Arfa Karani

Han Qin

Arya Thampi

Appendix – Officer responsibility

Position	Responsibility
President	<ul style="list-style-type: none">• Focuses on the strategic direction of the chapter• Responsible for "external relations" with the University,

	<p>Community, SPIE headquarters</p> <ul style="list-style-type: none"> • Facilitates collaborations with other SPIE student chapters and local sections worldwide • Oversees all chapter events and activities • Leads committee meetings (6-10 times/year)
Vice-president	<ul style="list-style-type: none"> • Perform duties of the President in event of his or her absence • Book avenues for the activities • Maintain the 'Journal Club' and the academic seminars
Secretary	<ul style="list-style-type: none"> • Responsible for recording minutes/notes of executive meetings • Filing the pictures and videos taken in the activities • Responsible for collecting and submitting chapter news to the SPIE Professional. • Responsible for annual report to SPIE and grant applications
Treasurer	<ul style="list-style-type: none"> • Produces a summary of account for SPIE annual report • Assists in making strategic financial decisions based on the state of chapter funding • Assist in grant applications
Webmaster	<ul style="list-style-type: none"> • Poster design for activities; • Helps with capture and posting of video content on our website (seminars, outreach demonstrations) • Ensures that the website and membership mail list are up to date
Outreach	<ul style="list-style-type: none"> • Coordinates public outreach activities, including Cambridge Science Festival, Physics at Work • Recruits volunteers for outreach events • Responsible for maintaining our set of educational modules • Coordinates development of new educational modules • Coordinates with other groups for possible combined outreach activities and discussion of short and long term outreach
Membership/Social	<ul style="list-style-type: none"> • Coordinates social events (BBQs, happy hours) • Maintains and updates the membership roster with SPIE HQ • Responsible for the recruitment of members to SPIE (eg. publicizing the chapter, recruitment contest, encouraging people to join the Executive Team)