



Annual Report

October 2013 – August 2014

Chapter overview

The Aston Institute of Photonic Technologies (AIPT) SPIE Student Chapter was established on the 17th of August 2012. The chapter consists mostly of PhD students and a few MSc. students from the Aston Institute of Photonic Technologies, Aston University Birmingham, United Kingdom. The main objective of forming the student chapter is to create a platform for students to interact and work together on various activities as it helps to build team work, communication and leadership skills in them. Since its inception, the chapter has been involved in many activities such as fresher's fair, welcome meeting, photonics laboratory tour, AIPT student conference and education outreach training.

AIPT SPIE Chapter members

The chapter officials were appointed based on the interest shown by students who signed up to be members, although in subsequent years, the officials will be elected by the members. The current members of the chapter are:

Name	Position	Email
Prof. David Webb	Chapter advisor	d.j.webb@aston.ac.uk
Ms. Ada Abang	President	abangam@aston.ac.uk
Mr. Srikanth Sugavanam	Vice President	sugavans@aston.ac.uk
Mr. Adenowo Gbadebo	Secretary	gbadebaa@aston.ac.uk
Mr. Changle Wang	Treasurer	wangc1@aston.ac.uk
Mr. Nikita Tarasov	Member	tarasovn@aston.ac.uk
Mr. Zhijun Yan	Member	yanz1@aston.ac.uk
Ms. Hannah Robins	Member	
Mr. Adedotun Adebayo	Member	adebayae@aston.ac.uk

AIPT SPIE activities Year 2014-2015

The AIPT chapter organized two events this year.

1. A workshop on Nanophotonics
2. A workshop on Anderson Localization in optics

Nanophotonics workshop

The SPIE organized a four day workshop on Nanophotonics, from the 24th of March to the 27th of March 2014. This workshop consisted of a series of four pedagogical lectures, given by Dr. Arkadi Chipouline of the Institute of Applied Physics, Friedrich Schiller University, Jena. The lectures touched upon both theoretical and practical aspects of nanophotonics, primarily focusing on plasmonics and metamaterials. The goal of the lectures were to provide the delegates the necessary tools that would help them carry over this new modality to their respective areas. The workshop was primarily attended by undergraduate and research students, and staff at Aston University.

The following were the particulars of the program:

Date	Time	Speaker/Topic
24th March 2014	10:00 am – 12:00 pm	Dr. Chipouline - 'Homogenization of Maxwell's equations for metamaterials: magnetic response in the frame of phenomenological and multipole models'.
	12:00 pm – 12:15 pm	Coffee
	12:15 pm – 1:00 pm	Dr. Alex Rozhin - 'Carbon nanomaterials for ultrafast photonics'.
25th March 2014	10:00 am – 12:00 pm	Dr. Chipouline – 'Multipole approach for “classical” metamaterials. Disordered metamaterials. Nonlinear metamaterials. Toroidal metamaterials.'
	12:00 pm – 12:15 pm	Coffee
	12:15 pm – 1:00 pm	Dr. Haitao Ye - 'Diamond - a material for next generation semiconductor'.
26th March 2014	10:00 am – 12:00 pm	Dr. Arkadi Chipouline - 'Coupling of plasmonic nano resonators and quantum objects. Relaxation dynamics at presence of nano resonators. Regular and stochastic dynamics of nanolaser (spaser).'
	12:00 pm – 12:15 pm	Coffee
	12:15 pm – 1:00 pm	Dr. Misha Sumetsky - 'Nanophotonics of optical fibers'.
27th March 2014	10:00 am – 12:00 pm	Dr. Arkadi Chipouline – 'Multipole approach for “quantum” metamaterials. Metamaterial caused enhancement of nonlinear response. Metamaterials with gain'.
	12:00 pm – 12:15 pm	Coffee
	12:15 pm – 1:00 pm	Dr. Chengbo Mou - 'Mode locked fiber lasers using carbon nanomaterials'.



Some scenes from the Nanophotonics workshop



Some scenes from the Nanophotonics workshop

Leadership workshop at the SPIE Photonics Conference

The AIPT student chapter was officially represented by office bearer, Mr. Srikanth Sugavanam, at the SPIE Student Chapter leadership workshop and the Student Chapter Exhibition at the SPIE Photonics Brussels, April 2014 in Brussels. The workshop was a wonderful platform for the exchange of ideas with representatives from other chapters.



Poster presented at the Leadership workshop

Financial breakdown

No funds were availed this session by the chapter

Conclusion

Compared to the very successful year of 2013, when the student chapter organized amongst other things, a student conference, the number of activities carried out the current year were lesser. This is primarily because almost all of the SPIE office bearers are graduating this academic session, and there were no new members who could take up the respective sessions. This year however, we have a new influx of graduation (Ph.d students) who are extremely enthusiastic in picking up with the chapter activities. The current members are actively supporting this transition, and we are optimistically gearing towards the Exciting year of light ahead of us.