Swinburne SPIE student chapter

Annual report of 2013

The chapter was established in February 2013

Swinburne University of Technology
John St., Hawthorn, VIC 3122, Australia

Advisor: Prof. Saulius Juodkazis; Professor of Nanophotonics, SPIE Fellow Member

List of current members:

No	Name	Expires
1	Kishore Bhowmik	1 February 2015
2	Peijun Gong	21 December 2014
3	Alireza Lajevardipour	24 November 2014
4	Chiara Paviolo	11 September 2014
5	Gediminas Seniutinas	26 November 2014
6	Priyamvada Venugopalan	26 May 2015
7	Jiawey Yong	13 November 2014
8	Ivaylo Ivanov	

Officers:

President: Alireza Lajevardipour (SPIE ID: 3508879, alajevardipour@swin.edu.au);

Vice-President: Ivaylo Ivanov (iivanov@swin.edu.au);

Secretary: Priyamvada Venugopalan (pvenugopalan@swin.edu.au);

Treasurer: Gediminas Seniutinas (gseniutinas@swin.edu.au);

Swinburne SPIE student chapter has been founded on February 2013. For establishing the chapter, current president (Alireza) started collecting required docs, talking to advisors and corresponding to Mr. Dirk Fabian. After few months working, we received the approval of our chapter on Feb 2013.

The Major activities:

Inviting visiting Lecturer:

A. Prof. Andrea Armani was our SPIE funded visiting lecturer. We hosted her on 11 December 2013 for a seminar on “Hybrid Organic-Inorganic Integrated Photonics”. The abstract is as following:

> *Integrated photonics offers a potential alternative to integrated electronics, with reduced heating and faster data rates. However, to achieve many of the desired performance metrics, it is necessary to combine disparate material systems which is extremely difficult due to a wide variety of reasons often including different lattice constants, thermal expansion coefficients, and refractive indices. Therefore, new materials and material systems are desired. One approach is to combine the optical materials conventionally used in telecommunications, such as silica, silicon and lithium niobate, with polymeric materials. These hybrid systems offer optical and mechanical properties which are not attainable with conventional material systems, such as athermal performance. This talk will present an overview of the integrated hybrid photonic device research in the Armani Lab, including athermal resonant cavities with quality factors in excess of 10 million. Additionally, new research exploring bio-hybrid devices for communications will be presented.*

FOCUS KOALA, Student Conference contribution:

We organized trip of 11 members who scientifically contributed in KOALA 2013 in Sydney University.

Leadership conference:

Ivaylo Ivanov was our chapter officer who attended SPIE leadership workshop in San Diego, August 2013.