



CHAPTER ANNUAL REPORT, 2009

Introduction

The SPIE-ISP student chapter is pleased to have successfully completed the year 2009 in a satisfying manner. The chapter members were involved in a lot of activities that will be presented in this annual report prepared for the year 2009.

Our annual Optics Fair was a success for the participation of students this year was overwhelming. Taking optics to the kids in a manner simple and lucid with a lot of visual aids is what optics fair strives to achieve. The optics kit prepared by the students is another venture that received a commendable response. The social outreach programs held are also laudable. We are thankful for all the support and aids that we receive from SPIE. The chapter president for the year 2008 Mr. Niraj Kumar Singh represented the chapter in the annual SPIE leadership meet held in San Diego, USA in the month of

August. The Annual General Body meeting held on elected the following as office bearers who led the chapter in the academic year of 2008.

The annual GBM was held on October 13th 2007. It was presided over by the chapter president Mr. Jemy James. The chapter Vice-president, Ms. Priyamvada welcomed all the chapter members to the GBM. Annual report was presented by the chapter secretary Mr. Niraj Kumar and the financial report was submitted by Ms. Tintu. The reports were approved by the chapter members.

Office Bearers:

The Annual General Body meeting held on 13th October 2008 elected the following as office bearers who led the chapter in the 2009.

President: Niraj Kumar Singh

Secretary: Vineeth Benyamin Yasarpudi

Co-Secretary: Reshma Anamari Mohandas

Treasurer: Misha Vattamthattel

Webmaster: Siddarth Joshi

Student Advisor: Dr. V. P. N Nampoori

The executive members were elected as follows

- Mr. Bikas Ranjan [Semester VII]
- Mr. Soumya [Semester V]
- Mr. Amit Kumar Prasad [Semester III]
- Mr. Abhishek Kumar [Semester I]

The Office Bearers of OSA Student chapters as well as IEEE-LEOS student chapter are also executive members.

Members of the chapter:

Ashar Abu Zubaida

Nitin Jha

Sushma Alapalli

Lyjo Joseph

P. Anish

Siddharth Joshi

Shafi Aroor

Abhishek Kumar

Bishwajeet Bhardwaj

Arvind Kumar

Shubham Chandel

Upkar Kumar

Alok Jha

Saroj Mahalik

Sunil Mahato

Reshma Mohandas

Krishna Murari Agrawal

Ravi Nandan

Ajan P. R.

Amit Prasad

Sanjay Priyadarshi

Deep Punj

Neelima R

Rohit Ramakrishnan

Bikas Ranjan

Rajeev Ranjan

Harikrishnan Sankaramangalam

Gaurav Sharma

Deepak Singh

Niraj Singh

Radhakant Singh

George Thachil

Misha Vattamthattel

Vineeth Yasarapudi

ACIVITES

I. Thursday seminars:

As many as 17 seminars were held by the chapter on Thursdays. The objective behind conducting this sort of seminars was to make students to interact and discuss with each other. The program has proved to be of great benefit for undergraduate students. Students were also seen to interact freely during these seminars. Following is the list of the seminars that were taken:-

1. Mr. Jithin Jose, Research Scholar ,University of Twente, Netherlands, "Photo acoustic imaging of tumor angiogenesis" on 8.1.09
2. "Photoluminescence Modification in self-Assembled Fluorescent 3D photonic crystals" by Harish N S Krishnamoorthy, Laboratory for Nano and Micro photonics, Department of Physics, Queens College of the City University of New York on 15.1.09
3. "Systems Biology; An emerging interdisciplinary area of research" by Dr Rajesh S, Lecturer, International School Of Photonics, CUSAT on 29.1.09
4. "Modeling - Techniques and applications for research in science" by Dr V P N Nampoori, Professor and Director, International School Of Photonics, CUSAT on 5.2.09
5. "Quantum optomechanics: radiation pressure effects on a micro mirror inside a cavity "by Bijoy Varghese,University of Camerino, Italy on 12.2.09
6. "Speckle Non destructive testing "by Dr A Mujeeb ,Lecturer, Cochin University College of Engineering, Kuttanad, CUSAT on 18.2.09
7. "Experimental Methods for Characterizing Laser Ablation of Solid Planar Targets using Nanosecond and Femtosecond Lasers" by Sudeesh K on 12.03.09
8. "Optical Chromatography Using Photonic Crystal Fiber" by Praveen Cheriyan Ashok, University of St. Andrews on 19.03.09
9. There will be a seminar on "Microcavity Lasers" by Dr Geetha K on 5.03.09
10. "Chalcogenide glasses as multifunctional photonic materials" by Dr Sheenu Thomas , Lecturer, CELOS on 26.03.09
11. "Photoinduced studies on certain bulk and thin film Chalcogenide glass" by Tintu.R, Research Scholar, ISP, CUSAT on 2.04.09

12. "Synthesis and optical characterization of MEHPPV" by Sreelekha G, Research Scholar, ISP,CUSAT on 22.04.09
13. 'Thermal Diffusivity of silver nanorods by thermal lens technique' by Misha Hari on 25-06-09
14. "Introduction to Confocal Imaging" by Dr. V. P. N. Nampoori, Director, International School of Photonics, CUSAT on 09.07.09
15. "Thermal and optical characterization of dye intercalated montmorillonites" by Mr. Lyjo K. Joseph ,Research Scholar ,International School of Photonics ,CUSAT
16. "Diode Pumped Nd: YLF Laser System" by Sreeja S, Research Scholar, International School of Photonics ,CUSAT on 30.07.09
17. "Nd : YAG Laser" by Mr. Libish T M ,Research Scholar ,International School of Photonics ,CUSAT on 06.08.09.09

II. Special Lectures

Some special lectures had also been conducted by the chapter. Professors and researchers in different fields had been invited for the purpose. Here are the some of the important lectures that were held:-

1. “Multiphoton Techniques applied to C. Elegans”, Dr. Manoj V Mathew (ICFO, Barcelona, Spain) on 11-12-09
2. “Photonics design software”, by Mr. K. R. Rohit on 02-12-09
3. “Quantum zeno effect”, by Dr. Anil Shaji (IISER, Trivandrum), on 14-10-09
4. “Sreeram Chakram”, by Mr. Padmakumar, on 18-09-09

III. Annual Photonics Workshop 2009

The chapter along with ISP-OSA student chapter organized a two day “Annual Photonics Workshop” on the 27th and 28th of February, 2009. The theme of this year’s workshop was “Nanophotonics”. The National Workshop was inaugurated

by the Vice Chancellor of Cochin University of Science and Technology, Dr. Gangan Prathap. The visiting professor of ISP, Dr. V. Unnikrishnan Nair, was the chief guest for the event. The two year event also witnessed the presentation of the “Nalanda Endowment Award” instituted by Prof. N. G. Devaki for the student who gets highest mark in the first semester of MSc. In Photonics. This year it was awarded to Ms. Anusha Keloth. The main attraction of the workshop was the special talk on Nano photonics by Dr. C. Vijayan, Professor, IIT Madras. He also released the annual magazine of the photonics department “Photonics News 2009”. Apart from that about 50 to 60 participants including professors, researcher, students and scientists also took part in the workshop.



Ms. Anusha Keloth receiving the Nalanda Endowment Award from Dr. Nair



Dr. C. Vijayan releasing the "Photonics News 2009"



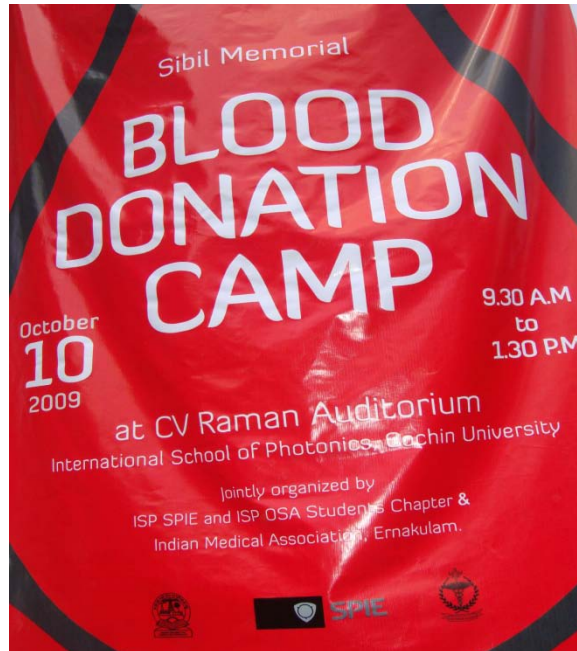
From left to right: Dr. U. Nair, Dr. P Radhakrishnan, Dr. C. Vijayan, Dr. V. P. N Nampoori and Dr. Sheenu Thomas

IV. Blood Donation Camp 2009

Despite advancement in modern medicine, there seems to be no substitute for human blood. The chapter in association with ISP-OSA student chapter and Indian Medical Association had organized a blood donation camp in memory of our beloved senior "Sibilathullah Aloor Mubarack". This was done as a part of the social out reach program of the chapter. This invoked a sense of commitment for the society among the chapter members.



Mr. Niraj Singh, *the president of ISP-SPIE student chapter donating blood in the Blood Donation Camp*



Blood Donation Camp, Oct 2009

V. Optics Fair 2009

Optics Fair 2009 was held on the 4th and 5th of December 2009 for school students. The main idea behind this fair was to introduce kids to the magnificent field of Optics in a manner involving visual aids. Three instructional units were prepared to address the students of different levels; the kids section for the students of class 4 to 7, the high school section for the students of class 8 to 10, and the higher secondary section for the students of class 11 and 12. Apart from these sections one general section was also there in place with some interesting experiments and optical illusions for all age groups students.

This year Optics Fair was a grand success as it witnessed the participation of 1709 students from different schools around Kerala. The feedback received was overwhelming.

It was during this fair that our latest and modified version of optics kit (Version 3.0) was also released. Some new experiments were included in the newer version.



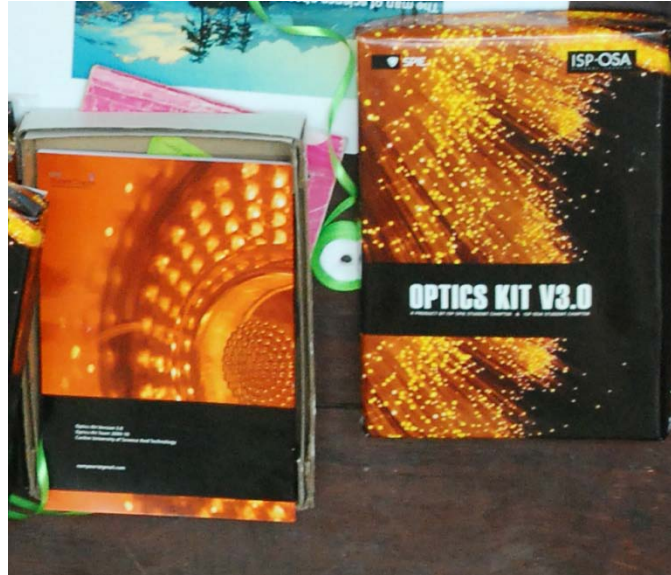
Optics Fair 2009



Mr. Sudhanshu Shekhar demonstrating "Thermal lensing" to the higher secondary section students.



Watchful Eyes: *Snap* narrating the success story of the Optics Fair 2009



OPTICS KIT V3.0

VI. Raman Day Celebration

To commemorate the birthday of Nobel Laureate Sir C. V. Raman, a small function was organized at International School of Photonics. Raman day lecture was delivered by Dr. V.P. N Nampoori, Director, ISP.



VII. Autueorcracy 2009

The chapter members are involved in many creative programs in the university. Some of the members were involved in the making of a short film titled '*folie a deaux*'. This film was screened in the Nirzar International Film Festival making it to the list of the best seven short films. This achievement was celebrated by the chapter members by organizing our very own film festival named '*Auteuorcracy*'.



Siddharth and Abhishek during the screening



Chapter members in rapt attention during the film festival

FUTURE ACTIVITIES:

- **Laser fest:** On the eve of completion of 50 years of lasers, the chapter is celebrating the year “2010” as “Laser Year”. Scientists and professors from different fields of optics will be invited in the coming months. The year long fest will see some of eminent personalities related to the world of photonics.
- **Optics movies:** For making optics interesting and simpler for students, it is planned to produce and distribute educational films with the help of available audio-visual facilities.
- **Saturday labs:** The chapter is planning to conduct Saturday lab for the secondary school students where they will be get an opportunity of setting up the experiments. The main idea behind this program is to give them a feel of experiments.
- **Seminars and talks:** Apart from the monthly seminars during Laser Fest, we are also planning to arrange other talks and seminars by the professors of well known institutes.
- **Optics to School:** We are planning to visit a school for every month of the year to continue the student outreaching programs.
- **Optics kit:** Keeping in mind the overwhelming response that the third version of the kit is receiving, we are planning to categorise it in two types; one for junior section(class 8 to 10) , and other for senior section(class 11 and 12).

Annual Financial Report of the ISP-SPIE Student Chapter-2009

Chapter bank account	: A/c No: SB 684 at Union Bank of India	
	Kalamassery, Ernakulam	
Balance brought forward	: 56821.271	
Annual grant from SPIE	: 53130	
Nemo Kit video award	: 32256.8	
Contribution from Outreach		
programmes	: 11000	
Total	: 153208.071	(3289.84 USD approx.)

Expenditure (Indian Rupees)

Seminar	: 5008.5	
GBM	: 700	
Invited Talk	: 20184.86	
Raman day celebration	: 2500	
Optics kit	: 17040	
Optics fair	: 21000	
Contribution to Annual Photonics		
Workshop	: 16602	
Social outreach program	: 22042	

Stationary/Printout/Photostat : 3818

Concession given for SPIE

Members for taking part in

Academic and other activities : 11469

Miscellaneous : 980

Total : 121344.36 (2605.63USD approx)

Balance : :31863.711 (684.21USD approx)

(Expected expenditure for the next set of optics kit -Rs. 25000)



The SPIE-ISP Student Chapter