

SPIE Annual Report 2012

1. SPIE Student Chapter Acharya Narendra Dev College at University of Delhi

It was an occasion of great honour and privilege when Acharya Narendra Dev College joined the family of SPIE – **Society of Photo-optical Instrumentation Engineers** by opening **SPIE Student Chapter Acharya Narendra Dev College at University of Delhi** in August 2010. With this the college joined the elite class of institutions like Stanford, MIT, IITs, NITs, and DTU etc. The chapter was formally inaugurated in February 2011 by Professor K.N Tripathi, Ex Vice chancellor, Dr. B.R. Ambedkar University, Agra.

The SPIE student chapter is open to all students of the University of Delhi. The chapter, which started with ten members, has now grown to a family of **twenty two** and there is a concerted effort to increase membership. The SPIE offers activity-grants based on the number of members in the chapter. Last year, the members used a share of this grant to organize its first two-day workshop on **Digital Holography**, in which eminent speakers like Professor Kehar Singh and Dr. Jobby Joseph from IIT, Delhi were invited for talks. The workshop saw huge participation from the students and subsequently one of the student-members Pratik Chakravarty of B.Sc.(H) Electronics Part III got the 'Officers travel grant' of USD 2000 for presenting his paper in the SPIE OPTICS + PHOTONICS Conference in San Diego, California – SPIE's biggest event of the year. Student members were also involved in an outreach programme on 'Optics' in various schools in Delhi. A group of undergraduate

students carried out discussions and demonstrations on basic behaviour of light, such as reflection, refraction, eye defects etc. These were carried out in an interactive mode with the school students showing excellent participation.

Following members of the chapter got opportunities to showcase their talent in international and national level conferences.

1. **Pratik Chakravarty** presented a paper '*Laser Based Studies in Geometrical Optics at School Level*' in SPIE Optics + Photonics 2011, during August 20 – 25, 2011 in San Diego, California.
2. **Kanika Sandhu** and **Purnima Wadhawan** presented papers in the conference 'COE 2011', Kolkata which was jointly organized by the SPIE CHAPTER, JIS Engineering College and University of Calcutta.

Other activities organised by the ANDC SPIE students chapter included a two-day workshop on 'Thin Films and their Applications' organised during February 24-25, 2012. The workshop was attended by 39 students belonging to Department of Electronics and Department of Physics. Invited talks were delivered by eminent speakers like Padmashri Professor K.L. Chopra, Ex-Director, IIT Kharagpur, Professor Vinay Gupta, Department of Physics and Astrophysics, University of Delhi, Professor P.K. Bhatnagar, Department of Electronic Science University of Delhi and Dr. Monika Tomar, Department of Physics, Miranda House, University of Delhi. The hands-on sessions were held at the Department of Physics and Astrophysics, University of Delhi. During hands-on sessions students were exposed to different tools and techniques in various laboratories like Fabrication lab, Plasma lab, Ceramic

lab, Pulsed Laser Deposition lab, RF Sputtering lab, Surface Plasmon Resonance lab etc. This workshop was organized by Dr. Amit Garg (Convenor) and Dr. Arijit Chowdhuri (Co-Convenor).

The Chapter at ANDC plans to design a 'low cost optical fibre kit' and envisages an outreach programme in which the kit would be demonstrated and freely distributed in schools, It also intends taking an excursion to research laboratories outside Delhi to provide a wider exposure to the students.

The methodology adopted in promotion of undergraduate research has been appreciated and published in Global talent newsletter, a digital Daily Science and Innovation newsletter published from Barcelona under new models of learning (<http://www.en.globaltalentnews.com/reflection/tribunes/5364/New-ways-to-communicate-and-learn-science.html>), which read as under.

“four students at the University of New Delhi, Vaibhav Sharma, Avdesh Kumar Singh, Zameer Khan and Deepak Joshi, along with Professors Amit Garg, Vishal Dhingra and Reena Sharma carried out a project that is inspiring for two reasons. The project “Investigating science hands-on to promote innovation and research at undergraduate level” brought science and technology closer to high school students while also enabling university students to see through a research project from the beginning until the publication of the results at a conference.