

## “Wonders of Electronics” - Laboratory Visit Program for School Students

IEEE Women in Engineering (WIE) Affinity Group, Calcutta Section and IEEE Calcutta University Student Branch jointly organized a one day camp on laboratory visit for school children named “Wonders of Electronics” on May 06, 2009 at Institute of Radio Physics and Electronics (IRPEL), University of Calcutta. The event primarily focused on increasing awareness among school students about recent technological developments in the domain of Engineering and Technology.

Approximately 90 school students from various of institution, such as “Ananda Asram Balika Vidyalaya”, Bethune Collegiate School”, “Brahma Girls High School”, “Dr. Shyama Prasad Mukherjee Institution”, “Beleghata Santi Sangha School for Boys” and “Beleghata Santi Sangha School for Girls” from the city of Kolkata, enthusiastically attended the entire program.

The notable dignitaries and experts present in the inaugural session were, Prof. S. Sen, honorable Dean of faculty of Engineering of Calcutta University as chairman of the inaugural session, head of the department of Department of Radio Physics and Electronics, University of Calcutta Prof. Goutam Ghosh, Prof. N. R. Das, honorable counselor of IEEE Calcutta University Student Branch, Prof. N. Das (ISI, Kolkata), honorable chairman of IEEE WIE Affinity Group, Calcutta Section.



Prof. N. Das briefly pointed out the role of women engineers in the society and motivated the school students, specifically the girls, to remain in higher academics in their future life. Prof. G Ghosh, the head of the department of Radio Physics and Electronics, Calcutta University, in his address, illustrated the need for intensifying such awareness and educational program among modern day students and the basic need for the students in the field of academics. Prof. N. R. Das briefly described the introduction and the role of Calcutta University Student Branch and role of students to carry out such awareness programs in the society. Finally the presidential address was given by Prof. S. Sen, the dean of faculty of engineering, University of Calcutta as the chairman in the inaugural session.

# IEEE – WIE Outreach Program

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In the technical session, an illuminating lecture on the basics of electronics was presented by Prof. Bhavani Prasad Sinha (ISI, Kolkata), IEEE Fellow in a very interesting way. As a teacher and scientist he wisely explained the true wonders of electronics. The laboratory visit program was another illuminating aspect of this camp. A brief idea about the hands on experiments was illustrated by Rikmantra Basu, MTech. students of IRPEL. Finally vote of thanks was delivered by Soumyadeep Misra, BTech. students of IRPEL, at the end of the morning session.



The next half of the program was primarily devoted on the laboratory visit program.



Seven laboratories of Institute of Radio Physics and Electronics, University of Calcutta were scheduled for this session:

- **Microelectronics and Device Fabrication Laboratory:** The basics of chip fabrication, photolithographic techniques were discussed.

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- VLSI and Digital Laboratory: Digital logic and FPGA based experiments were illustrated.
- Space Application Laboratory: Basic concepts of GPS communication were lucidly elaborated.
- Optical Communication Laboratory: Optical fibre related concepts and its relation with communication were presented.
- Microprocessor Laboratory: Concepts of computing was elaborated using 8085 based microprocessor.
- Television Laboratory: Concepts of basic TV transmission, sound and picture reproduction were analyzed.
- Communication Laboratory: Satellite communication concept and rain drop attenuation measurement by Disdrometer were presented.

The final session was a valedictory and discussion ceremony. Different participants along with different school teachers posted their own views in this regard at the end. A spot quiz contest was organized based on the visit to the laboratories. Belehata Santi Sangha School for Boys and Ananda Ashram Balika Vidyalaya jointly bagged the first crown. Belehata Santi Sangha School for Girls was the runner up.

The inaugural and laboratory visit sessions, were managed by student volunteers of Institute of Radio Physics and Electronics, University of Calcutta very efficiently. This program boosted enthusiasm and workability among the students and helped to unravel the “Wonder of Electronics” before the budding scientists of future.

(Input of this report came from Rikmantra Basu, Calcutta Section)