firmation. Recent studies done elsewhere have shown that applying regression co-efficients optimized for in-vitro measurements gives poorer results compared to MVLR analysis of in-vivo spectra, thus emphasising the need for in-vivo studies. These in-vivo studies have also lived upto the expectation that the LIF technique can diagnose cancer and more significantly can distinguish between precancerous lesions from non-cancerous abnormal tissues with accuracies greater than endoscopist's visual assessment and nearly comparable to the histological assessment.

To sum up laser induced auto fluorescence spectroscopy holds considerable promise for early diagnosis of cancer. In the in-vitro studies carried out at CAT, on human tissues resected at surgery or biopsy from various organs, the technique has been verified to provide good discrimination between cancerous and non-cancerous tissues. With these encouraging results more detailed in vitro studies as well as in-vivo studies required for clinical exploitation are now being planned.

P K Gupta and S K Majumder

CONFERENCES / WORKSHOPS

INCOVAST - 95

An International Conference on Vacuum Science and Technology and SRS Vacuum Systems (INCOVAST-95) was organised at CAT during January 30 to February 2, 1995. The conference was organised jointly by CAT and Indian Vacuum Society (IVS). It was attended by 200 participants of which 30 scientists were from countries like USA, Japan, France, UK, Switzerland, Russia and Korea.

Dr Alain Poncet, CERN, Geneva delivered the key note address and gave an account of the latest developments in the field of vacuum systems for Synchrotron Radiation Sources. Dr R J Reid, Daresbury Laboratory, UK was present as the official representative of International Union for Vacuum, Science and Techniques and applications. Topics such as light source vacuum systems, vacuum pumps and components, electron beam equipment, thin films, and novel vacuum facilities, were covered in 23 invited and 120 contributed papers.

The conference was inaugurated by Shri A N Prasad, Director, BARC. Dr D D Bhawalkar, Director, CAT presided over the inaugural function. Shri J K N Sharma, President, IVS gave a brief account of the activities of IVS. Shri S S Ramamurthi, CAT was the Chairman of the organising committee. Shri A K Sinha, BARC was the convenor while Shri A S Raja Rao, CAT was the co-convenor.

Modern Trends in Computer Technology (MTCT-95)

A two day National Seminar on Modern Trends in Computer Technology (MTCT-95) was conducted jointly by CAT and the Computer Society of India (Indore Chapter) during February 23-24, 1995. The seminar was inaugurated by Dr S S Kapoor, Director, Physics and E & I Groups, BARC, who spoke about the development of parallel machines in India. The inaugural function was presided over by Dr D D Bhawalkar, Director, CAT, who spoke about the importance of computers in office automation.

The seminar was attended by 55 registered participants. Twenty three papers were presented in the seminar along with seven invited talks. These covered a wide range of modern trends like multimedia technology, networks and data communications, parallel processing, automation and software engineering, text to speech systems, hand writing recognition, image processing, on-line mirroring of databases etc. The seminar convenor was Shri A K Gupta and the seminar coordinator was Shri Anil Rawat, both from CAT.



Dr S S Kapoor and Dr D D Bhawalkar inauguarating the Seminar.

अतिचालकता विषय पर संगोष्ठी

केन्द्र में 28 फरवरी 1995 को 'राष्ट्रीय विज्ञान दिवस' के अवसर पर 'अतिचालकता – विज्ञान, तकनीकी व अनुप्रयोग' विषय पर एक एक-दिवसीय वैज्ञानिक संगोष्ठी, हिन्दी माध्यम से, आयोजित की गई । संगोष्ठी का उदघाटन बरकतुल्लाह विश्वविद्यालय, भोपाल के डॉ. आर.के सिंह, अध्यक्ष-भौतिकी विभाग तथा निदेशक-कम्प्यूटर केन्द्र ने किया।



संगोध्ठी के तीन सत्रों में अतिचालकता संबंधी कई वातिएँ हिन्दी में प्रस्तुत की गयी । संगोध्ठी के आरम्भ में केन्द्र में वैज्ञानिक कार्यकलापों में हिन्दी प्रयोग के संबंध में रिपोर्ट और अतिथियों का स्वागत श्री सुनील सरवाही, सहायक निदेशक (राजभाषा) ने किया । राभाकास के अध्यक्ष श्री सत्यनारायण व्यास ने संगोध्ठी परिचय दिया । उदघाटन सत्र की अध्यक्षता परियोजना प्रबंधक (त्वरित्र) श्री एस.एस. राममूर्ति ने की । गोध्टी में विषय के अत्यंत रूचिकर और प्रासंगिक होने के कारण आरम्भ से अंत तक सिक्रयता और जीवंतता बनी रही तथा इसमें बड़ी संख्या में बाहरी प्रतिनिधीयों ने भाग लिया। इस संगोध्ठी में केन्द्र के ही वैज्ञानिक सर्वश्री डॉ. आर.वी. नॉदेडकर, डॉ. पी.के. गुप्ता, डॉ. वी.एन. रॉय, डॉ. मंजुला भटनागर (मुख्य चिकित्सा अधिकारी) एवं डॉ. एच.एम.पी. सिंह, चिकित्सा अधिकारी को उनके व्यारा केन्द्र की पत्रिका प्रगति को समृध्द करने के लिए हिन्दी में वैज्ञानिक और तकनिकी लेखन के लिए डॉ. आर.के. सिंह (मुख्य अतिथि) व्यारा प्रतीक- चिन्ह भेंट कर सम्मानित किया गया।

राजभाषा के प्रयोग को बढ़ाने हेतु केंद्र को न.स.भा.का.स. से विशेष पुरस्कार

सरकारी कामकाज में हिन्दी प्रयोग को बदाने हेतु इन्दौर नगर के केन्द्रीय कार्यालयों में, इस केन्द्र को नगर राजभाषा कार्यान्वयन समिति, इन्दौर व्दारा विशेष पुरस्कार प्रदान किया गया । वर्ष 1994 - 95 के दौरान हिन्दी संवर्धन हेतु यह पुरस्कार श्री राधाकृष्ण सैनी, प्रशासनिक अधिकारी ने 20 मई, 1995 को नगर राजभाषा कार्यान्वययन समिति के अध्यक्ष श्री गोविंदन सें. तंपी, समाहर्ता केन्द्रीय उत्पाद एंव सीमा शुल्क से प्राप्त किया।

PUBLICATIONS

In Journals

- "Dependence of laser intensity on cavity losses for a detuned single-mode laser", S C Mehendale, Appl. Opt. 33, 8330 (1994).
- "Photoacoustic detection of the decomposition kinetics of polymers: interpretation of acoustic signals", L M Kukreja and P Hess, Appl. Sur. Sci. 79-80, 399 (1994).
- "Time evolution of laser induced polymer ablation studied by attenuation of probe HeNe laser beam", L M Kukreja and PHess, Appl. Sur. Sci. 79-80, 158 (1994).
- "A picosecond optical pulse generator to calibrate the optical streak camera", V N Rai, M Shukla, R K Khardekar and H C Pant, Rev. Sci. Inst. 66, 3125 (1995).
- "Metastable magnetic response of UCu₂Ge₂", S B Roy, A K Pradhan and P Chaddah, Phil. Mag. B 71, 97 (1995).
- "Comments on 'Note on the magnetism of UCu₂Ge₂", S B Roy, Philos. Mag. B 71, 105 (1995).

- "Thermopower of (Ce, Pr) Cu₆ alloys", M Ocko, M Miljak, I Kos, J G Park and S B Roy, J Phys. Condensed Matter 7, 2979 (1995).
- "Large magnetoresistance in La_{1-x}Sr_xMnO₃ and its dependence on magnetization", R Mahendiran, A K Raychaudhuri, A Chainani, D D Sarma and S B Roy, Appl. Phys. Lett. 66, 233 (1995).
- 9. "A study of the harmonic generation and minor hysteresis loops in granular samples of Bi-2223: a comparison with YBaCuO", S B Roy, S Kumar, A K Pradhan, P Chaddah, R Prasad, N C Soni and K Adhikari, Supercond. Sci. & Tech. 8, 155 (1995).
- "How to use synchrotron radiation", R V Nandedkar, Physics Education Jan.-March, 395 (1995).
- 11. "Status of Indus-1 SR source", S S Ramamurthi and G Singh, Nucl. Inst. Meth. A 359, 15 (1995).
- "Magnetic properties of Y_{1-x}Pr_xBa₂Cu₃O_{7-y} crystals: magnetization and irreversibility line", A K Pradhan, S