

## Guest Editorial

**Dr. A.L. Rao**  
**COO, Wipro**  
**Member, BITES**



I am happy to note that BITES has been able to reinforce its mission through well articulated vision and mission statements. The mission statement published in the last issue of the newsletter really captures the challenges and tasks ahead for achieving the excellence in IT education.

Although the academia, industry and organizations like NASSCOM have taken some initiatives towards improving the quality of IT education, it requires a well coordinated effort among the various stakeholders to get the maximum returns on investments. One of the most critical factors that need to

be addressed is the quality of the faculty and their motivation to give their best. Here again the industry and the academia should come together and create avenues whereby the deserving faculty gets the necessary opportunity and incentive to update their knowledge and competence.

The second area to address is the teaching methodology. While there is an abundant technology today to create and deliver quality content, the real impact depends on the way the learning is imparted. There is a fundamental need to examine the various factors that impact the learning of the students and bring in the necessary changes to make the learning very effective. Few approaches could be, stimulating higher level of thinking skills, team approach towards problem solving, group discussions, fostering interpersonal relationships, building self esteem in students, converting classroom to real life employment environment etc.

I hope the innovations taking place across industry, combined with the emerging technologies will help achieve excellence in the IT education in India and enable our country to retain its leadership in providing IT solutions and services to the world.

Regards,  
A.L. Rao

## From Chairman's Desk



In our continuing efforts toward institutional, faculty and student development for enhancing the quality of IT education and the employability of our IT graduates, we conducted the following Faculty Development Workshop on April 28, 2007: "Web Services and Implementation" sponsored by Infosys and hosted by RV College of Engineering, Bangalore

A very important dimension of higher education, in general, and S&T education, in particular, is R&D. Except for a few institutions, R&D is simply absent in most institutions. One of the reasons advanced is lack of funding. There are several funding agencies for sponsored research in our country. In order to let our technical institutions know of the opportunities available, BITES organized a one-day Workshop on "Funding Opportunities for Sponsored Research", on May 5, 2007 at the JSS Academy of Technical Education, Bangalore. Senior officials from the following 8 agencies made presentations about their schemes, including guidelines, formats and evaluation criteria: AICTE, DRDO, DST, IGCAR, ISRO, MCIT, MNRE and TIFAC. The Workshop was inaugurated by Dr. V.K.Aatre, former Director General, DRDO; Mr. M.N.Vidyashankar, IT/BT Secretary, Govt. of Karnataka, presided over the inaugural function. The entire proceedings were video-taped and are captured on a DVD, which will be made available to interested institutions.

BITES was one of the Partners for the Indo-US Engineering Education Forum Workshop held during June 3-5, 2007 at the Infosys Mysore Center. Both the Chairman and Co-Chairman, BITES, participated in the Workshop.

Ahead on the Agenda for the next few months are: an MoU with Microsoft for collaborative academic activities; a Workshop for about a dozen IT majors to inform the academic leaders of technical institutions about their academic partnership initiatives and activities; and a study on the employability of our IT products from engineering colleges and polytechnics.

**Prof. R. Natarajan**

## BITES Faculty Development Workshops receive an enthusiastic response

With the twin objectives of fostering better Industry - Institute Interaction in member institutions and also make faculty members aware of the emerging technologies and their applications, BITES has launched a faculty development workshop series. The workshops have received good response and faculty members from engineering colleges participated and interacted with industry experts.

Apart from technical sessions, a separate panel discussion/interaction session was incorporated to facilitate one to one interaction between faculty and industry experts. The entire proceedings of the workshop have been videographed and converted in to Virtual Classroom DVDs with synchronized video, audio and power point presentations. These DVDs will be available for distribution shortly.

The salient features of the first two faculty development workshops are given below.

### Faculty Development workshop On Independent Software Verification and Validation

**Venue:** BNM Institute of Technology  
**Date:** March 31, 2007  
**Sponsor:** TESCO-HSC  
**Host:** BNMIT

Independent software verification and validation is emerging as an important line of business for software companies with about 30% of the costs of software development being directly attributable to software testing. Shrinking product development cycles, increased competition and the need to control costs have contributed to the development of robust strategies in software testing to ensure quality, reliability and maintainability of the finished software product. New techniques and tools are being developed in this important area of software development life cycle with emphasis on hardware/software co-testing, defect tracking, automated testing, and performance testing etc. There is lack of quality manpower in this area and with the outsourcing of software V&V activities to Indian companies demand-supply gap is expected to further intensify.

The workshop brought in to focus different aspects of software testing like testing standards, test plans, methodologies and best practices that are actually practiced in software companies. Many case studies were showcased for the benefit of participants with special emphasis on Automation and Performance testing.

The following sessions were conducted as part of the workshop

I Session:	Introduction to IVV and latest trends in Testing
II session:	Test Planning, Test Strategy and Test design Techniques
III Session:	Test Reporting and Metrics
IV Session:	Automation and Performance Testing
Panel Discussion	<b><i>“ Software Testing as a career”</i></b>

The workshop concluded with an interesting panel discussion which highlighted the job opportunities and growth aspects for engineering graduates who would like to pursue career in software testing. The panel discussion also touched upon how faculty members can take up consulting assignments in software V&V activities. Industry experts from TESCO-HSC also offered to help institutions to create a curriculum in software verification and validation.

## Faculty Development workshop On Web Services and Implementation

**Venue:** RV college of Engineering  
**Date:** April 28, 2007  
**Sponsor:** Infosys Technologies  
**Host:** RVCE

Improving “business agility” and “reducing time to market” are key ingredients for survival in today’s market place. New paradigms like “*On demand business*” and “*Real-time enterprise*” are emerging to redefine the way business is managed. Web services are at the heart of this new business shift and provide several benefits to a global enterprise

*“Web Services provide a simplified mechanism to connect applications regardless of the technology or devices they use, or their location. They are based on industry standard protocols with universal vendor support that can leverage the internet for low cost communications, as well as other transport mechanisms. The loosely coupled messaging approach supports multiple connectivity and information sharing scenarios via services that are self describing and can be automatically discovered.”*

Some of the potential benefits of Web Services include:

- ✦ Improves business process efficiency by reducing cost and particularly time to connect applications
- ✦ Enables real time business, and straight through processing
- ✦ Supports globalisation, and integration of geographically dispersed organizations
- ✦ Customer, partner and employee enablement
- ✦ Improves time to market as connections to partners and customers can be made faster, even dynamically

Following sessions were conducted as part of the workshop

I Session:	Introduction to Web services
II session:	XML, WSDL, SOAP, UDDI
III Session:	Legacy and Web services
IV Session:	Web services Security
V Session	Web services Performance
VI Session	Concluding Remarks Dr. M.P. Ravindra, Senior VP & Head (E&R), Infosys

The workshop examined the issues related to security with special emphasis on federated security in which the authentication, authorization, key management have to be handled in a distributed environment. Similarly the issues related to Web services performance and SLAs that need to be guaranteed across the enterprise were discussed.

Dr. M.P. Ravindra in his concluding remarks drew the attention of the participants to some of the open problems that still need to be resolved in the area of Web Services. Infosys would be happy to extend support to faculty members who would be willing to research on these problems. He invited faculty members to submit proposals for evaluation; good proposals would be supported by Infosys in the form of fellowships.

## Workshop On Funding Opportunities for Sponsored Research

**Venue: JSSATE**  
**Date: May 5, 2007**  
**Sponsor: BITES**  
**Host: JSSATE**

There is an urgent need to inculcate a research culture in our engineering institutions which can have a big impact on the quality of Education being delivered. Faculty with research experience can improve problem solving skills among students; enhance the stature of the institution they work for and help the university education system to be more quality oriented.

An institute with a strong research culture can also work closely with Industries to support their R&D initiatives. The symbiotic relationship between Institutions and Industries will help the industry also move up the value chain with better quality manpower being available to them. Many central and state agencies are supporting sponsored research activities; but most of our institutions are not aware of the funding opportunities available for sponsored research.

BITES therefore organized a one day workshop on ***“Funding opportunities for Sponsored research”*** and brought together eight funding agencies that provide grants for sponsored research and help institutions to actively pursue their research programs.

Directors and other senior officials in charge of the various schemes from the funding organizations made presentations regarding different schemes, criteria for submission, how to prepare proposals etc. About 80 faculty members who are in charge of research programs from 40 engineering colleges participated in the workshop. A compendium of different schemes, formats, proposal tips etc. has been compiled by BITES that could serve as reference guide for making research proposals. The list of agencies and speakers is given below.

Name	Title	Organization
Dr. S. K. Gupta	Advisor	AICTE
Dr. M. Saibaba	Head, Strategic & HR Planning,	IGCAR
Dr. S. Vathsal	Director, ER & IPR	DRDO
Dr. Deepak Bhatnagar	Advisor	TIFAC
Dr. A. R. Shukla	Advisor, R&D,	MNRE
Ms. J. Khurana	Senior Director,	MCIT
Shri M.R. Kulkarni	Scientist E,	DST
Shri S. Satish	Deputy Director	ISRO

### Announcements

Sri S. Gopalakrishnan, Co-Chairman, BITES, took over as CEO and Managing Director of Infosys technologies. Our congratulations and best wishes to Sri Gopalakrishnan on this momentous occasion

Professor R.Natarajan has been invited to join the Editorial Advisory Board of the international journal *“Journal of Engineering Education”* published by the American Society of Engineering Education.

Proceedings of Faculty Development workshops and the workshop on sponsored research are available as virtual classroom DVDs for distribution. For details contact Ms. Jyothi, Program Officer, BITES. Telephone No: 080-22207270/71. E-mail Id: [admin@bites-bangalore.org](mailto:admin@bites-bangalore.org)