



# International Institute of Information Technology Bangalore (A Deemed University)

Last Updated: 22 February 2013



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# Director's Message

*The graduate programmes at IITB are among the best in the country, offering education oriented towards producing highly-qualified practitioners and researchers. As an independent institution and a deemed university, IITB collaborates with the IT industry, leading academic institutions abroad as well as India, and eminent scientists and industry leaders to offer students the best possible education. Our students have been well received by the industry, and have been placed with some of the leading companies in the field; in fact, IITB can boast of 100% placement for all its graduates. Some of our Masters students are also pursuing doctoral degrees both in India and abroad, with a view to enter academic / research careers.*

*Students are encouraged to ask questions, pursue their research interests, and gain membership and respect in the select club of high-achieving IT professionals. The infrastructure and interactions that IITB offers students and faculty makes possible the pursuit of individual and joint projects, industry-sponsored research, and study that is of the highest standards required for global competitiveness.*

*The institute has a relaxed, friendly atmosphere, but with a constant buzz of excitement due to many well-known visitors including giants from the industry, well-known scientists, and leaders of government from all over the world.*

*Admission is selective but not restrictive. We are very proud of the achievements of our alumni, and strive to gain good students who will achieve their potential and continue this trend. We thus warmly welcome applicants from different backgrounds who share our vision of excellence.*

*S. Sadagopan  
Director*

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# Genesis

The International Institute of Information Technology Bangalore, a Deemed University, popularly known as IIITB, was established in 1999 with a vision to contribute to the IT world by focusing on education and research, entrepreneurship and innovation. The Institute is a registered not-for-profit society funded jointly by the Government of Karnataka and the IT industry.

Since its inception, IIITB, with its unique model of education, research, and industry interaction, has grown in stature to become an institution of considerable repute in academic as well as corporate circles. The Institute works in partnership with the corporate sector, while retaining the freedom of an academic institution. It is inspired by other renowned institutions, and also strives to emulate an academic culture that is on par with the best international institutions.

# Why IIITB

The IT industry in India as a whole is seeing an increasing shift from low-end programming or service-oriented jobs to high-end research and design that competes with the best worldwide. Many young people seeking entry to the IT sector find that they do not have the necessary technical or research background to obtain the types of roles they seek in their careers and must settle for unfulfilling work, and industry as well is frustrated by the lack of quality in the talent pool from which it must create tomorrow's exciting innovations and products. The International Institute of Information Technology Bangalore offers students a unique environment that provides them with state-of-the-art knowledge in multiple disciplines beyond traditional computer science, covering the wider spectrum of Information Technology. IIITB equips students to provide thought leadership and gain the satisfaction of fulfilling their creative and intellectual potential by becoming full peers to the brightest minds in the world.

Considering the pervasive nature of IT in all walks of life, IIITB encourages and admits students from a wide variety of academic disciplines into the programmes. About half of our students in recent years have been bright young men and women who already have some work experience, but have decided to take a break from their careers to pursue our M.Tech. programme in order to shift their careers on to more stimulating and rewarding paths. Strong interaction with the industry is built into our academic programmes because IIITB believes in equipping students to become productive right from the day they enter the industry. For those aspiring for academic goals, IIITB provides a research environment as well. Students have the opportunity to get financial aid in the form of scholarships and internships to help meet tuition and other expenses, so a bright student is limited only by his or her own vision and ambition.

# Location

Bangalore is often called the Silicon Valley of India. With the pleasant climate, the urban amenities, the rich tradition of technical education, and the highly professional ambience, numerous global and local corporate big-name entities have found a home here. The IITB campus is located in the heart of Electronics City, one of the prestigious IT destinations in Bangalore, with excellent infrastructure, facilities, and services.

The list of companies located in the high-tech area close to the Institute is a virtual Who's Who of the IT business. IITB is situated opposite the Infosys corporate headquarters, and is within easy walking distance of other major companies like HP, Siemens, Wipro, HCL, GE, Tata, and others, giving students and faculty opportunities for productive interaction with the industry.

# Campus & Housing

The Institute moved to its present Electronics City campus in 2003. The campus features well-maintained lush green lawns, musical fountains, and a small pond, creating an ideal learning environment to stimulate intellectual and personal growth.

Designed and built in compliance with the highest global standards, the teaching and learning infrastructure features the most advanced elements of contemporary academic tools. With addition of a new floor to the main academic block, the institute now has over 120,000 square feet of air-conditioned space, uninterrupted power supply, and a well-crafted interior, the Institute offers a world-class environment for students and faculty.

All the classrooms are "smart," with high-speed data networks and large projection systems for audio and video. The well-designed main classroom comfortably seats in excess of 150 students. Video conferencing capabilities are built in using state-of-the-art audio-visual equipment. They include electronic smart boards, location-sensing microphones, and multiple LCD projectors, thus enabling an enriching learning experience.

All the academic programmes are residential in nature. Separate hostel facility is available for men and women. A majority of the students get individual rooms. Meals are available at the Food Court located in a separate building (the food that our students have is the same food that is also had by faculty and staff, and offered to visitors including distinguished dignitaries, thus ensuring high quality). A separate cafeteria is available for small snacks during working hours.

For recreation inside the campus, indoor games (carroms, chess and table tennis) and a limited number of outdoor games (cricket, foot ball and basket ball) are available. All the hostel blocks are equipped with a reading room and a music/meditation hall and gymnasium facility.

# Programmes Offered

The Institute is an exclusive graduate school that offers programmes that lead to post-graduate degrees. The graduate study programmes offered lead to the Integrated Master of Technology (Integrated M.Tech.), Master of Technology (M.Tech.), the Master of Science (M.S.) by Research, and the Doctor of Philosophy (Ph.D.) degrees in information technology. These programmes offer training that is comparable to the best anywhere, and cater to different needs.

## Integrated M.Tech.

Integrated M.Tech. Programme is a five-year full time dual degree programme intended for students who have passed or are appearing for Senior Secondary (Plus Two) examination with Mathematics or equivalent subject. At the end of five years of the programme, successful students get both B.Tech. and M.Tech. degree in IT. Please see the eligibility criteria for further details

## M.Tech.

The M.Tech. degree is intended to provide education for students who wish to work in the IT industry as practitioners. It is awarded upon successful completion of a 4-semester broad-based academic programme in IT, going beyond traditional computer science. Apart from imparting technical knowledge, the programme teaches managerial and other life skills that are essential for a successful career in today's competitive IT industry. All students enrolled in the M.Tech. programme are residential, full-time students. The M.Tech. programme is primarily intended for those who have a bachelors degree in engineering. Please see the eligibility criteria for further details.

**NB:** IITB does not have a part-time M.Tech programme for working professionals.

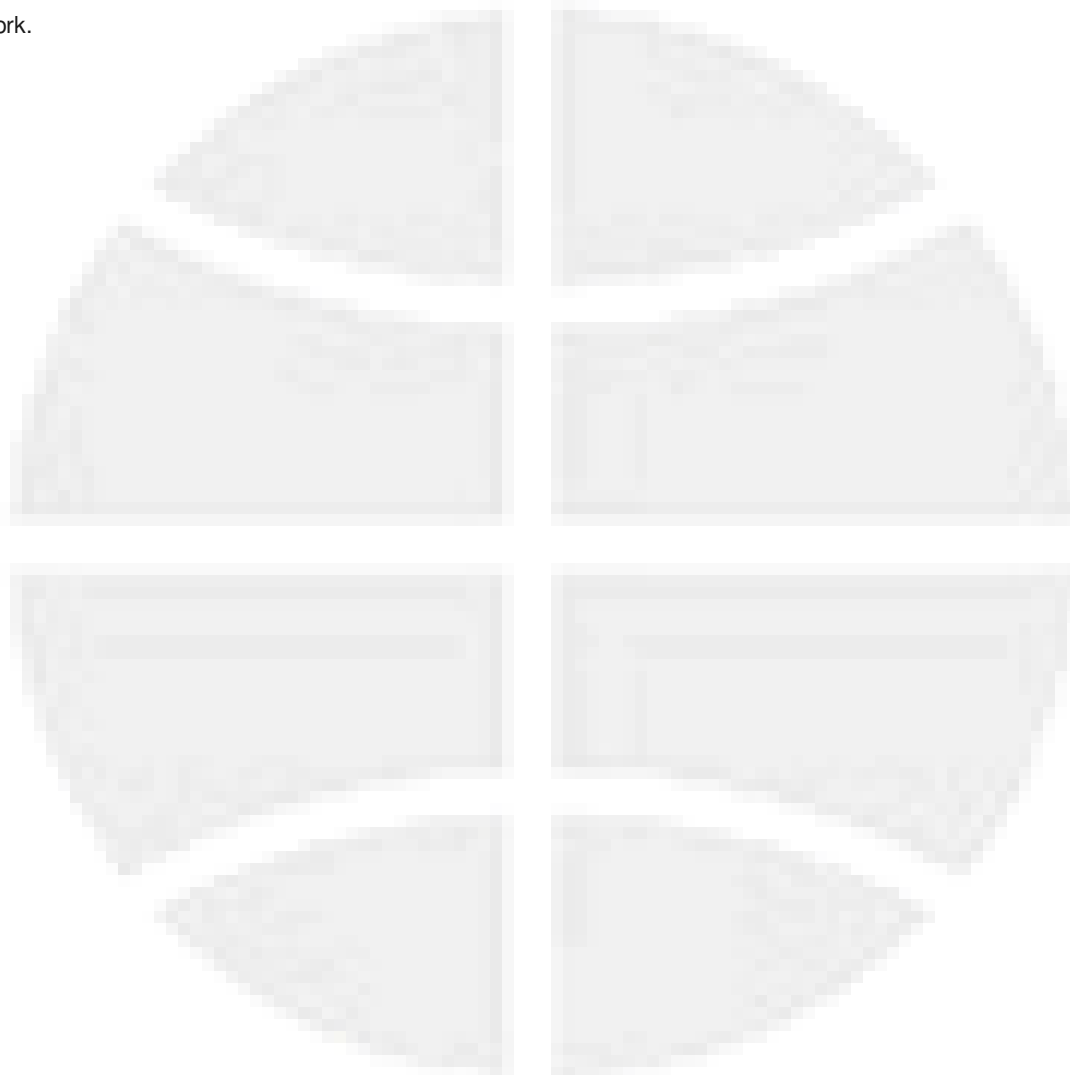
## M.S. by Research

The Institute offers two research programmes for students who are interested in carrying out quality research in the chosen field of study.

The M.S. by Research degree is intended for mature students who wish to learn and perform research in a supportive academic environment. It is awarded upon successful completion of a graduate-level research programme, usually lasting four semesters. Beyond the satisfaction of a relatively small number of coursework requirements, the major focus of the programme is on developing research skills, leading to the completion of a Master's thesis describing significant original results. Most M.S. by Research students are working professionals (some already working as research scientists in reputed organizations or government bodies), who are sponsored by their employers.

## Ph.D.

The Ph.D. is the terminal, research-oriented degree in the subject, intended to prepare students for research, teaching, and scholarly careers in academic settings or research laboratories. It connotes a superior comprehension of the field and a high aptitude for research, and is awarded upon completion of a programme that takes from 3 to 5 years. Beyond the satisfaction of a relatively small number of coursework requirements, the major focus is on carrying out a significant body of original research and the writing and defense of a doctoral dissertation describing this work.





# Course Structure

Fundamental to Information Technology is the integration of different technologies and the integration of technologies into organizations. The uniqueness of the IITB curriculum is that it makes for a broad-based programme going beyond traditional computer science, and enables students to function well in the industry, while keeping the rigorous learning expected of a classical programme.

## Integrated M.Tech. Course Structure

The period of the Integrated M.Tech. programme will be a minimum of five years. The total number of credits required to fulfill requirements of the programme is 204. The course curriculum includes courses that are mandatory for all the students (“core”) as well courses that they can choose depending upon their area of interest (“elective”). The elective courses are broadly grouped into two streams comprised of several focus area as shown below:

Stream 1 Focus Areas	Stream 2 Focus Areas
Computer Science	Networking and Communication
Database and Information Systems	Embedded Systems Design
Software Engineering	Signal Processing
IT & Society	VLSI Design
	IT & Society

The broad content structure of the proposed programme is summarized in the table below.

Part	Course Type	Course Details	# Courses	# Credits	
IT	Core		12	49	
	Elective		11	44	
	Summer Internship		-	4	
	M.Tech. Thesis		-	32	
	<b>Total # Credits of the IT Part</b>				<b>129</b>
Non-IT	Core	Basic Engineering Sciences / Skills	4	17	
		Mathematics	4	16	
		Physics	2	8	
		Chemistry / Introductory Bioscience	1	4	
		Introduction to Profession	1	2	
		English	1	2	
		Technical Communication	1	2	
		Physical Education (Pass/Fail)	2	0	
	<b>Total # Credits</b>				<b>51</b>
	Elective	HSS / Management	4	16	
		Application of IT to Domains	2	8	
<b>Total # Credits</b>			<b>24</b>		
<b>Total # Credits of the Non-IT Part</b>				<b>75</b>	
<b>Total # Credits of the Program (≈ 63% IT; ≈ 37% Non-IT)</b>				<b>204</b> ( = 129 + 75 )	

## M.Tech. Course Structure

The M.Tech. programme is a four semester programme. The first three semesters of the programme constitute academic course work. During the fourth semester, a student can either take up an industry internship or academic research at the institute leading to a thesis.

The M.Tech. programme also includes a unique 3-week period during the beginning of the programme called “Preparatory Semester.” The preparatory semester is intended to give uniform background to all the students irrespective of their technical background. This semester covers introductory programming, mathematics and statistics and an optional course on basic electronics. After the 3-week preparatory term, the first semester of the M.Tech. programme consists entirely of required “core” courses. These teach the new student the common foundational elements required, such as advanced programming principles, mathematical background, data structures and algorithms, computer networks, digital communication, databases, and fundamentals of software engineering. The second semester builds on this foundation with two more core courses. In addition to doing the core courses, the student now has the freedom to begin focusing in one of four areas, namely:

- Computer Science
- Database and Information Systems
- Networking, Communication and Embedded Systems
- Software Engineering

Across the second and third semesters, the students take at least five elective courses in their area of specialization and an additional three open elective courses (some of which may include research and other individual or group projects supervised by a faculty member). The final semester is designated for industry internship, or the writing and defense of a research thesis. The following table summarizes the overall course structure of the M.Tech.

<b>Prep-Term</b> 3 weeks	<ul style="list-style-type: none"> <li>• Prep 1: Introductory Programming 1</li> <li>• Prep 2: Introductory Programming 2</li> </ul>	
<b>Semester I</b> 15 weeks	<ul style="list-style-type: none"> <li>• Core 1: Data Structures and Algorithms</li> <li>• Core 2: Mathematics for IT</li> <li>• Core 3: Operating System</li> </ul>	<ul style="list-style-type: none"> <li>• Core 4: Database Systems</li> <li>• Core 5: Networking &amp; Communication</li> </ul>
<b>Semester II</b> 17 weeks	<ul style="list-style-type: none"> <li>• Core 6: Software Engineering Practices</li> <li>• Elective 1</li> <li>• Elective 2</li> </ul>	<ul style="list-style-type: none"> <li>• Elective 3</li> <li>• Elective 4</li> </ul>
<b>Summer Session</b> 9 weeks	<ul style="list-style-type: none"> <li>• Peri-IT 1: Technical Communication</li> <li>• Peri-IT 2: Marketing and Strategy</li> <li>• Project</li> </ul>	
<b>Semester III</b> 17 weeks	<ul style="list-style-type: none"> <li>• Elective 5</li> <li>• Elective 6</li> </ul>	<ul style="list-style-type: none"> <li>• Elective 7</li> <li>• Elective 8</li> </ul>
<b>Semester IV</b> 26 weeks	<b>Industrial Internship/Research Thesis</b>	

# Academic Infrastructure



The infrastructure for IITB's fully networked campus consists of a high-speed fiber-optic backbone connected to the internal network through a high-end gigabit Ethernet switch. Dedicated network equipment includes printers, scanners, and other equipment. Connectivity in the campus is established at two levels. First, the local intranet implements a “virtual classroom,” where all the visual material, such as presentation slides used by professors in class, is made available electronically to students. All assignments and projects are announced and submitted online. The intranet also enables knowledge sharing among students.

At the second level, 24x7 Internet access is available throughout campus, in both wired and wireless modes. IITB is one of the few institutions in India to have an active wireless LAN (and was the first to have this technology way back in 1999). Wireless-mode access is available throughout campus academic and hostel blocks using the 802.11b/g protocol. In addition, high-speed Ethernet ports are installed at various locations in the building, providing wired Internet access through a proxy web server.



All students use a Wi-Fi enabled laptop for their exclusive use. This ensures a student to machine ratio of better than 1:1, implying complete accessibility. Moreover, the institute has high end computational servers. The servers provide an in-house private cloud computing infrastructure through virtualization. This in turn allows for an individual approach to learning, providing the freedom to learn at one's own pace and focus on one's chosen domain of specialization.



The Institute has an academic library with an excellent collection of books, journals, and magazines both in print and electronic form. Students have privileged free access to numerous online research resources (such as the ACM Digital Library, IEEEExplore, JSTOR).

# Research Labs

## **Wireless Network lab -- WNL (Prof. Debabrata Das)**

The lab focuses on research involving networking standards and technology. Current research work concentrates upon latest broadband wireless access technology – WiMAX/LTE. Major areas of work include, medium access control (MAC), QoS, QoE, power management, media independent handover (MIH). Microsoft Research India and TCS Research Ph.D fellowship students work in this lab.

## **Mobile Computing and IMS Innovation Lab (Prof. Debabrata Das)**

In this lab the projects are sponsored by HP and Nokia. The R&D focus on video and audio streaming including handheld devices, as also Video Media Platform, Charging, Service Delivery in IMS using Application Servers, XDMS, HSS and Presence servers. Moreover, this lab addresses issues related to quality of service modeling in IMS architecture with respect to differential traffic.

## **SNIA - IITB Laboratory (Prof. G. N. S. Prasanna)**

The institute in collaboration with the Storage Network Industry Association host the SNIA IITB Lab, an inter-industry centre for training, education network and research in all aspect of storage technology. The centre functions as a model centre in this area for academics and industry in India and South Asia in general.

## **Power line Communication Lab (Prof. GNS Prasanna & Prof. Jyotsna Bapat)**

This lab has been sponsored by NXP. The research focuses on various aspects of power line communication for AMR over low voltage power lines. The areas include channel modeling, transceiver design and MAC layer design.

## **Computing Systems Lab (Prof. Shrishra Rao)**

This lab focuses on systems research, with a focus on contemporary issues such as virtualization, security, reliability, energy-aware computing, high-performance computing using multicore systems, and cloud computing. There are diverse architectures and operating systems in use, such as SPARC, Mac Minis running Mac OS X 10.6, Cell Broadband Engines on Sony PS3s running Yellow Dog Linux, dual-core 64-bit AMD Opterons running FreeBSD, Open SUSE, Open Solaris, and Windows 7/XP.

## **Centre for Spatial Information Sciences (Prof. S Rajagopalan)**

The Centre for Spatial Information Sciences (CSIS) at IIT Bangalore was established in October 2006. The centre carries out basic and applied research in Geographic Information Sciences Domain, like Geographic Information Retrieval. GIR can be considered as a specialization of Information Retrieval, it takes into account the spatial and Object Oriented Spatial Databases; Geographic Ontology- the study of geographic objects and the relationship between them and sensor maps.

## **Open Systems Laboratory (Prof. Srinath Srinivasa)**

The Open Systems Laboratory (OSL) at IIT Bangalore was started in 2002. It works in the broad areas of data and information systems engineering, graph data management, web information retrieval, text mining, social network analysis, mobile data management, distributed computing and openworld computing. The lab also hosts the first

PlanetLab ([www.planet-lab.org](http://www.planet-lab.org)) node in India. PlanetLab grid is a worldwide grid for testing distributed algorithms. The OSL is also involved in another major project called Silverfish, whose objective is to develop a wide-area data grid for academic materials and course pages.

#### **Software Design Laboratory (Prof. K. V. Dinesha)**

The research focus here is on the design and architecture of software. Design patterns approach for the software development process is studied, with special emphasis on the impacts of design principals and patterns on the flexibility as one of the prime focus.

#### **Document Engineering Lab (Prof. Chandrashekar Ramanathan)**

Documents still constitute a significant content type in the enterprise today. Document Engineering deals with developing algorithms, techniques, tools and processes that help in creating and manipulating the content, format, and representation of documents. There are several challenges being addressed as part of Document Engineering. The DocEng lab explores the various standards and tools available in this space. Following are some of the projects from the Lab:

- Pralekhasaara (for interactive content chunking and assembling)
- ORCA (Online Repository for Content Assembly)
- DocuBhasha (translation of documents, supported by Microsoft Research)

#### **Information Convergence Lab (Prof. Chandrashekar Ramanathan)**

The revolution of mobile phones made media convergence possible. Today we don't need separate devices for talking on the phone, listening to music, watching videos, surfing the Internet, reading/sending e-mails. Information convergence is a similar concept that is focused on interoperability of information scattered across multiple dimensions and multiple sources and destinations. The focus of the Information Convergence Lab (I-COG Lab) is to first identify and define various information convergence challenges that are relevant to the real world. The current focus of the lab is to start with a study of information convergence challenges specifically targeted at large enterprises and the government. Based on this understanding of the needs and contexts of information convergence, the lab will specify reusable frameworks that address these challenges in a unified and integrated environment. The focus would be to develop standards-based solutions that can be applied widely.

#### **Center for Electronics and Embedded Systems (Prof. P G Poonacha)**

The Center for Electronics and Embedded Systems (CEEMS) Lab's objective is to nurture talent by focusing on Embedded Computing, Wireless Communication and Computer vision. Facilities available in the lab will enable world class research and education and will be seen as an extension of the strong Information Technology (IT) Core competence already available at IITB. CEEMS Lab collaborates with public and private organizations to do research and development in the emerging areas of embedded systems to bridge the gap between academia output and industry requirements thus providing every learner an equal opportunity to become industry ready.

CEEMS lab is funded by the government of Karnataka.

### Wireless Sensor Network (WSN) Lab (Prof. Jyotsna Bapat)

Machine to machine (M2M) communication is going to be one of the major areas of R&D in networking and communication specialization. M2M faces multiple challenges and some of the major issues related to efficient communication between sensors, protocols, power saving in sensor, etc. In IITB we have a WSN lab which supports multiple R&D projects on sensor networks. This lab has been sponsored by Govt. of Karnataka for development in embedded systems.

## Tuition, Aid & Scholarships

The tuition for the various programmes at IITB is shown below:

<b>Integrated M.Tech.</b>	Rs. 75,000/- per semester
<b>M.Tech.</b>	Rs. 75,000/- per full semester, Rs 37,500/- for the summer semester
<b>MS by Research</b>	Rs. 25,000/- per semester
<b>Ph.D</b>	Rs. 25,000/- per semester

The fees are revised every two years. The fees payable by the Integrated M Tech, MS and Ph.D students from their third year onwards will be as per the fees in vogue at that time. M.Tech, students pay the fees that are in vogue at the time of their admission. In addition, residential students pay Rs. 3000 towards hostel rent per month and approximately Rs. 3500 per month for food expense. Other costs for books and supplies, travel, purchase of a laptop, etc., need to be factored by students depending on their individual circumstances.

Most M.Tech. and Integrated M.Tech. students receive bank loans at fairly generous terms that cover all their costs. About 25% of the students are eligible for merit-based, industry-sponsored scholarships. Teaching assistantship opportunities, which provide a financial incentive besides valuable experience for future careers, are available to senior M.Tech. students based on their academic performances in the first year. Students can also apply for various central sector scholarships.

Employed students who undertake studies at IITB are expected to cover their own costs, including tuition. Many such students are sponsored by their employers.

For full-time MS by Research students, a fellowship of Rs.12,000/- per month for the first 18 months and Rs. 15,000 for the next six months, is available in the form of teaching assistantships.

For full-time PhD students, a fellowship of Rs.25,000/- per month for the first 3 years (Extendable to 1 more year in deserving cases) is available in the form of teaching assistantships. Such funding for our Ph.D. students comes from within IITB or with industry support from HP, IBM, Intel, Infosys, Motorola, Siemens, Microsoft, and other companies.

### Industry-Funded Scholarships

The Institute has offered about 11 scholarships (out of about 160 students admitted in 2012) to meritorious students joining the M.Tech programme. The institute expects to offer a similar number of industry-funded scholarships in 2013 as well. The scholarship amount covers almost all student expenses over the duration of their M. Tech. The

selection for these scholarships is carried out by the industry representatives along with IITB faculty. 2012-13 scholarship sponsors include; Infosys, ABB, and SocGen. IITB is constantly working with Industry to bring in more scholarships. Similar scholarship schemes are planned to be extended for Integrated M.Tech. students as well in the future.

## Internship

For M. Tech. students, the Institute's internship programme gives the students an opportunity to get hands-on exposure in real-world projects as part of the final semester. Many of the companies that participate in the final Placement Programme also participate in the Internship Programme. This allows students to spend one whole semester in the industry working on live projects prior to graduation. The companies provide students with stipends for the duration of the internship and also the opportunity to work with their teams, at their premises, on challenging real-life projects. The internship programme is an avenue for placement, as many interns who perform well are given job offers by the companies they work for in the final semester.

In addition to the industry-sponsored internships based out of India, there is also an opportunity to do research and project work at many foreign universities with which IITB has signed a Memorandum of Understanding (MoU). Some of the universities to which students have gone for internship in 2013 are HOF university of Applied sciences, Germany, Freie Universitat Berlin, Germany, The University of Nottingham, UK and University Of West Indies.

Some of our students have also gone to National University of Singapore as Research Assistants during their internship tenure. The internship includes financial aid to cover travel and living expenses during the course of internship.

Integrated M. Tech. students will be pursuing a summer internship at the end of third year. This will provide them with an exposure to work on industrial projects.



# Placements

The Institute has a strong placement programme that has achieved 100% placement of all its graduates. The graduates have found challenging assignments with several multinational and Indian giants of the IT industry. A broad-based curriculum coupled with strong bonds with the industry ensures that the students are equipped with the right skills to be highly productive and ready to take on real-world IT challenges when they graduate.

IITB has enjoyed excellent placement for all the twelve batches of M.Tech students who have graduated so far. Of the 1556 alumni, a few have gone for doctoral studies at MIT, UC Berkeley, Indiana University, University of Washington and Syracuse University in USA, Paderborn and University of Kaiserslautern in Germany, Trento in Italy, National University of Singapore in Singapore, IITB and BITS Pilani in India. The rest have taken up positions in a spectrum of firms that represent established IT giants to exciting new start-ups. The list of firms where IITB students are placed include:

Aalayance • ABB • Accenture • Active Sphere • Adobe • Agere • Allgo • Alcatel Lucent • Alopa • Algo Embedded Systems • Akamai • Amdocs • American Express • Antarix • ARIBA • ARM • Attribo • Axiom • Aruba networks • Backend • Bangalore Labs • Beecem • BEA • Birlasoft • Bluefont • Broadcom • Bosch • ByDesign (Velankani group) • Cadence • Caritor • CDC Software • C-Cor • Cell Next • Cisco • Compaq • Cognizant • Coca-Cola • Covansys • Crimson Logic • Customer Asset • Citigroup • Commvault • Daimler Chrysler • Delmia • Delphi • Digital • D-Link • DSQ • Deutsche Bank • Echo Labs • eBay • EMC • Fast Media • Fiber Link • Flipkart • GAVS • GE • GE Infrastructure • GE Healthcare • GE Medicare • GE Transportation • GE Aviation • GM • Goldman Sachs and Geodesic • GXS • HCL • Honeywell • HP • HSBC • Huawei • IBM • i-Flex • iGate • Indscape • Infinite • Infosys • Infogain • Innovation • Indus Tech Innovations • Infoken • Informatica • Intuit • i2 • IT Solutions • Intel • IPInfusion • IMS Health • JustEat • Kodak • Kuliza • LG Soft • Lucent • Magma • Manmar • Mastek • Marketelligent • MBDRl • MFormation • Microsoft • MicroSoft Research • Mindtree • Motorola • National Instruments • Nokia • Novell • Netapp • Nvidia • NXP • Oracle • Operative • PA Consulting • P & G • Philips • Pramati • Proteans • Qwest • QSO Technologies • Quicklogic • Qualcomm • Ramco • Rapidgdm • Readiminds • Rivershine • SAP • SAIL • Sasken • SAS • Satyam • Schneider • Schneider Electric • Shipara • Siemens • Samsung • SNT Multicore • SNS • SUN • Symphony • Symontec • Synopsis • Synova • Societe Generale • Surewaves • Tata Steel • Talisma • Tavant Technologies • Tata Power SED • TCS • Tesco • Techspan • Techvoyant • Texas Instruments • Thoughtworks • Thorogood • TLL • Tyfone • UGS • U Moksha • Visual Soft • Virisign • Webmethods • Wipro • Web18 • Xora • Yos Technologies • Yahoo • Ziva • Zensar • Zomato



# Academic Outreach Activities

IITB exposes its students to the industrial outlook through a multitude of conferences, workshops and other events.

Some major international conferences were hosted by IITB in 2012:

- 9th International Colloquium on Theoretical Aspects of Computing 2012 (**ICTAC 2012**) 24-27 September 2012, Bangalore, India.
- International Conference on Implementing Social Programs: Better Processes, Better Technology, Better Results" in Bangalore, 4-6 September, 2012.
- 3rd International Conference on Services in Emerging Markets (SRII-India ICSEM 2012) Dec 12-15, 2012, Infosys Campus, Mysore. IITB was the hosting partner along with Infosys for this conference.

Other events hosted at IIT-B in the year 2012 include

- **Nokia Mobile Application Development** in January 2012
- **HP Network University** in January 2012
- **EDUTECH 2012** in February 2012
- **Technology & Accessibility Workshop** in February 2012
- **excITe children** Program for High School students in April 2012
- **Indo-Dutch Science Workshop** in April 2012
- **Sensor Based App development Workshop** in July 2012
- **HP Institute** in September 2012
- **EU Awareness Campaign** in September 2012

Our students have been presenting papers along with faculty members in several conferences. In addition, they have been winning awards. The prominent awards include

- IITB students winning the prestigious "Intel India Embedded Challenge" with a cash grant of Rs 5,00,000 (being the FIRST among 62 competing teams from across the country with all IIT's participating)
- Creditable performance in IEEE Xtreme Programming competition 2012 and ACM ICPC competition 2012
- Infosys Hashers 2012 (Winning the third prize)
- CEEES Lab work on Raspberry Pi getting acknowledged in Cambridge University event
- Our Alumni have been chosen as one of the emerging tech startups in TechSparks 2012

# Social & Cultural Activity

IITB organizes intra-collegiate sports fest titled “Spandan”. Large number of present and past students participate in the fest. Spandan includes events like cricket, badminton, volley ball, foot ball, carroms, chess, online gaming contests and so on.

IITB understands its social responsibility and has its students working for it under the name AIKYAM. Our mission includes giving back to the underprivileged children of our society. Some of our activities include teaching spoken English, spreading computer awareness and organizing theater workshop for these children.

Along with Infosys, IITB conducted a Special Training Programme (STP) that helped nearly 100 students belonging to the underprivileged sections of the society. The experiment undertaken in 2007-08 got repeated at IITB in 2008-09. A similar programme titled “Udaan” is planned in 2013 for promising young graduates from Jammu and Kashmir.

# Admissions

IITB will admit about 60 students for the Integrated M.Tech. programme. Prospective candidates for the Integrated M.Tech. programme should have done their 10+2 or equivalent level with Mathematics and must have obtained first class or equivalent. Students expecting to complete 10+2 or equivalent by August 2013 may also apply.

Typically IITB admits about 125-150 students every year into the flagship M.Tech. Programme in IT. The minimum qualification for admission to M.Tech. programme in the Institute is a first-class four-year bachelor's degree in engineering (i.e., B.E., B.Tech., or equivalent). M.Sc./MCA degree holders can also apply. Final-year students expecting to graduate by August 2013 may also apply.

For the Ph.D. programme, applications from candidates holding Master's degrees in a technical discipline (i.e., an M.E., M.Tech., or equivalent) will be preferred, but candidates who possess just the minimum qualification but show great aptitude for research (e.g., as shown by research publications in international conferences or journals, or patent applications) may be considered. For the Ph.D programme in Information Technology and Society those holding Master's Degree in Social Sciences including Economics will also be eligible to apply.

Candidates who are perceived to lack sufficient research skills but show promise may sometimes also be advised to pursue the M.S. by Research first, prior to being accepted into the Ph.D. programme.

Admissions are generally made to Indian citizens living in India. We are open to receiving applications from outstanding foreign applicants.

## Integrated M.Tech. Admissions

### Eligibility

#### *Minimum Requirements*

The minimum qualification for admission to the Integrated M.Tech. programme at IITB is a first-class in 10 + 2 (or equivalent) with Mathematics as one of the subjects. Students expecting to complete the minimum requirement by August 2013 may also apply. The detailed list of qualifying examinations is given below.

#### DETAILED LIST OF QUALIFYING EXAMINATIONS

1. The +2 level examination in the 10+2 pattern of examination of any recognized Central/State Board of Secondary Examination, such as Central Board of Secondary Education, New Delhi, and Council for Indian School Certificate Examination, New Delhi
2. Intermediate or two-year Pre-University Examination conducted by a recognized Board/University.
3. Final Examination of the two-year course of the Joint Services Wing of the National Defence Academy.
4. Any Public School/Board/University Examination in India or in foreign countries recognized by the Association of Indian Universities or any state or central government as equivalent to 10+2 system.
5. H.S.C. Vocational Examination.
6. Senior Secondary School Examination conducted by the National Institute Open Schooling (NIOS) with a minimum of five subjects.
7. 3 or 4-year diploma recognized by AICTE or a State Board of Technical Education.

The applicant must have taken Mathematics as one of the subjects in the above qualifying examination.

All the candidates must secure at least 60% marks in aggregate in qualifying examination. The percentage of marks awarded by the Board will be treated as final. If the Board does not award the percentage of marks, it will be calculated based on the marks obtained in all subjects listed in the mark sheet. If any Board awards only letter grades without providing an equivalent percentage of marks on the grade sheet, the candidate should obtain a certificate from the Board specifying the equivalent marks, and submit it at the time of counseling / admission. In case such a certificate is not provided, the decision taken by the IITB Admissions Committee shall be final.

## Selection Procedure

Admissions to the Integrated M.Tech. programme is solely on the basis of performance at the Joint Entrance Examination Main - JEE (Main) 2013 conducted in the year 2013. Applicants must report in the application form the All India Rank obtained and the marks obtained in JEE (Main) 2013.

## iMTech – Important Dates

<b>Online Applications</b>	
Last date for receiving online applications	July 10, 2013
Last date for receiving application fee	July 13, 2013
<b>Selection and Joining</b>	
Notification of selected candidate on the candidate portal <i>(to be checked by the candidates by signing in to the portal)</i>	July 17, 2013
Remittance of acceptance fee	As noted in offer letter
Joining date for the new batch	July 29, 2013
Induction and course registration	July 29 - Aug 3, 2013
Classes begin	August 5, 2013

Candidates are encouraged to complete the online application process (including the payment of application fee) well before the announcement of the JEE (main) results. Such of those candidates will be given a provision to update their JEE (Main) score in the portal as and when the results are available.

## M.Tech. Admissions

### Eligibility

#### *Minimum Requirements*

The minimum qualification for admission to the M.Tech. programme at IITB is a first-class four-year bachelor's degree in engineering (i.e. B.E., B.Tech., or equivalent). First class degree holders in 3-year undergraduate programmes followed by Masters Degree with first class in any of the physical sciences, or an MCA degree with first class, can also apply. Final-year students expecting to graduate by August 2013 may also apply. First class or equivalent is required in 12th (or equivalent) grade as well.

### Selection Procedure

Admissions to the M.Tech. programme is on the basis of prior academic performance (at the higher secondary level and beyond), performance in the GATE examination. GATE scores (valid as of June 1, 2013) from the following disciplines will be considered for this purpose:

- CS - Computer Science and IT

- EC - Electronics and Communication Engineering
- EE - Electrical Engineering

## International Students

Foreign nationals (FNs) and non-resident Indians (NRIs) are welcome to apply for the M.Tech. programme. Such applicants can apply with valid GRE and TOEFL scores. Only those students whose undergraduate education was in an Anglophone country (i.e. Australia, Canada, New Zealand, Singapore, UK, and the US) are exempt from TOEFL. Shortlisted FNs and NRIs applicants have to go through an online interview,

## Working Professionals

Working professionals applying for the M.Tech. programme must get leave for the duration of the M.Tech. programme. Such applicants have to submit a letter, during the admission, from a supervisor or other authorized representative of the employer stating that there is no objection to the applicant's joining IITB as a student. Working students will also need sponsorship from the employer, or obtain support from other sources to meet their costs, as scholarships and other financial support are not available to working students.

## M.Tech. – Important Dates

Online Applications	
Last date for applying online	March 31, 2013
Last date for receiving Application Fee	April 05, 2013
Selection and Joining	
Notification of selection	May 15, 2013
Remittance of acceptance fee	As noted in offer letter
Remittance of balance fee (Term I, hostel, etc.)	July 12, 2013
Joining date for new batch	July 12, 2013
Classes begin	July 15, 2013

## MS by Research Admissions

### Eligibility

#### *Minimum Requirements*

The minimum qualification for admission is a first-class four-year bachelor's degree in engineering (i.e. B.E., B.Tech., or equivalent). M.Sc./MCA degree holders can also apply. Final-year students expecting to graduate by August 2013 may also apply. We are open to receiving applications to the research programmes (particularly for the Ph.D.) from outstanding international students.

#### *Working Professionals*

Working professionals may apply for the M.S. by Research programme. Such applications have to be sent through the employer (or accompanied by a letter from a supervisor or other authorized representative of the employer stating that there is no objection to the applicant's joining IITB as a student). Working students will also

need sponsorship from the employer, or obtain support from other sources to meet their costs, as scholarships and other financial support are not available to working students.

## Selection Procedure

Admission to the M.S. by Research programme is on the basis of submitted records of prior academic work and other scholarship showing aptitude for research, letters of recommendation, and a personal interview.

### Key Dates

<b>Online Applications</b>	
Last date for receiving online applications	May 22, 2013
Last date for receiving application fee	May 31, 2013
<b>Selection and Joining</b>	
Short listing of candidate for interviews	June 9, 2013
Interviews at IITB	End of June, 2013
Joining for Preparatory Term (Optional)	July 12, 2013
Joining and course registration	August 2, 2013
Classes begin	August 5, 2013

## Ph.D. Admissions

IITB invites applications for the Ph.D. programme for the academic year starting in August 2013. Visit our website for details.

### Eligibility

#### *Minimum Requirements*

The usual minimum qualification required is a 1st class four-year degree in a technical discipline (i.e., a 1st class B.E., B.Tech, or equivalent), but people holding 1st class Master's degrees in the mathematical sciences (e.g. an M.Sc. in mathematics, physics, statistics, or electronics) may also apply. Ordinarily, applications from candidates holding Master's degrees in a technical discipline (i.e. an M.E., M.Tech, or equivalent) will be preferred. Working professionals are required to either take leave for the entire duration of study or obtain a relieving order from the current employer at the time of joining the full-time Ph.D. program.

Admission to the Ph.D. programme is on the basis of submitted records of prior academic work and other scholarship showing aptitude for research, letters of recommendation, and a personal interview.

### Key Dates

<b>Online Applications</b>	
Last date for applying online	May 22, 2013
Last date for receiving application fee	May 31, 2013
<b>Selection and Joining</b>	
Short listing of candidate for interviews	June 10, 2013
Interviews at IITB	End of June, 2013
Joining for Preparatory Term (Optional)	July 12, 2013
Joining and course registration	August 2, 2013
Classes begin	August 5, 2013

# How to apply

## Online Application Form

Candidates can apply for all the programmes using online application only.

### Online Application Portal

Access the IITB Online Application site (<http://iitb.in>) and fill in the online application form.

- Step a) Click on **Register as New Applicant** and create your User ID and Password for IITB Online Admissions Portal. You will receive an email notification with your User ID and Password after successful registration. This User ID and Password can be used to login to the Online Admissions Portal to Apply for relevant programme at IITB, to check the status of your Application Fee payment and to Download the Admit Card once it is generated.
- Step b) Login to the portal using your UserID and Password.
- Step c) Read the **Instructions** to fill the application form. Also read the **Terms and Conditions**.
- Step d) Click on the “**Apply**” link corresponding to the programme you are applying (M.Tech, Integrated M.Tech., MS by Research, or PhD) from the “**Application Form**” page to go to the corresponding Online Application Form.
- Step e) There are 3 pages for the application form – The “**Personal Information**” page, the “**Enrollment Information**” page and the “**Competitive Exam Details**” page. You may “Save” the partially filled application form, logout and come back to it later to complete it. All the mandatory fields need to be filled before the final submission of the application form. A unique Candidate ID gets assigned to the application on the first Save of the Application Form. Once the Application Form is submitted - it cannot be edited.
- Step f) Applicants need to fill the Payment Details after submitting the application. Link is provided on the application form for the Payment page. You can also go to **Application Form** home page and click on **View/Edit** link under **Payment Info**.

On the **Payment Information** page - Click on **Pay Now** button for Application Fee to fill in the Bank Challan or Demand Draft details. Click **Submit** to submit the payment details. The payment status is changed to “**Sent**” when the information is submitted. Once the IITB office admin receives the Challan/DD in mail they will update the status of your payment to “**Paid**”. Then only your application will get considered for admission.

Applicants can change their Password or Email Address in the system from the “**User Information**” page.



## Payment Information

Step a) All candidates need to pay a non-refundable application fee of **Rs.1000/-**. There are two options for making the payment as explained below:

### 1. DEMAND DRAFT:

**Get a demand draft from any Bank in favor of "International Institute of Information Technology Bangalore" payable at Bangalore. Write you name and application ID at the back of the DD.**

Choose the mode of Payment as DD in "Make Payment" Tab and click "Submit". Take a print of the Payment advice form and sign it.

Send the following to the IITB address given below:

- Original demand draft ( write your Name and the Application ID on the backside )
- MS and Ph D candidates shall send a Print out of your Online Application Form (You can go to Preview, click on view Application to take a print out of it). Other candidates may print a copy of the online form and keep it with them for their personal records.

#### Admissions

**International Institute of Information Technology, Bangalore**

26/C, Electronics City,  
Hosur Road, Bangalore - 560100

### 2. Cash at SBI Bank (Payment through challan)

You may choose to pay the application fee through cash. Select the option of Payment through **SBI Bank branch** and take the print out of the SBI Pay-in-slip. This pay-in-slip consists of 3 parts – one for bank's record, one for your own record and the third for sending to IITB for completing the registration process. You need to pay the cash at any SBI Bank branches in your city. On making the payment, the bank will return two parts of the pay-in-slip to you, one of which will be the receipt for you.

Send the following to the Collection Center address given below:

- Signed Pay-in-Slip (IITB Copy of the Challan)- write your Name and the Application ID on the backside
- MS and Ph D candidates shall send a Print out of your Online Application Form (You can go to Preview, click on view Application to take a print out of it). Other candidates may print a copy of the online form and keep it with them for their personal records.

#### Admissions

**International Institute of Information Technology, Bangalore**

26/C, Electronics City,  
Hosur Road, Bangalore - 560100

- Step b) IITB will authenticate the payment details and will update the portal status confirming the payment for IITB application form. Candidates can login to online application and visit the Application Summary to know the status of payment.

## Ph.D. Applications

Apply online as per the procedure given above and submit the following with a covering letter giving a summary, to:

### **Admissions**

#### **International Institute of Information Technology, Bangalore**

26/C, Electronics City,  
Hosur Road, Bangalore - 560100

- *A printout of the duly filled online application form*
- *Transcripts or attested copies of prior academic work, and copies of any published papers.*
- *A statement of purpose of between 1000-2000 words, indicating research goals and prior research experience.*
- *A non-refundable application fee of Rs. 1000, in the form of a demand draft payable to IIT-Bangalore.*

In addition, arrange to have three letters of recommendation supporting the application sent directly to the Registrar (Such letters should be from former Professors, research supervisors, or other qualified people familiar with the applicant and able to describe and attest to his/her scholastic ability and aptitude for first-rate research.).

## M.S. by Research Applications

Follow the procedure outlined above for the Ph.D. applications, indicating that your interest is in the M.S. by Research rather than the Ph.D.

## Address for Correspondence

All correspondence including the application form, proof of payment and other related documents must be sent to the following address:

### **Registrar**

#### **International Institute of Information Technology, Bangalore**

26/C, Electronics City,  
Hosur Road, Bangalore - 560100

Tel. (080) 4140 7777 / 2852 7627 Fax: (080) 28527636

e-mail: [admissions@iiitb.ac.in](mailto:admissions@iiitb.ac.in)

# FACULTY PROFILE

**Balakrishnan Ashok** (*Ph.D., University of Massachusetts, Amherst, USA*)

*ashok@iiitb.ac.in*



Dr. B. Ashok did his Ph.D. from the University of Massachusetts, Amherst, specializing in theoretical polymer physics, followed by postdoctoral work at the Lorentz Institute for Theoretical Physics, Leiden, The Netherlands, and at the Materials Research Centre, IISc., Bangalore. Prior to joining IIIT-B in July, 2012, he was an Assistant Professor at the central University of Hyderabad since April, 2007. His research interests are principally in theoretical soft condensed matter physics, complex systems and dynamical systems theory.

**Jyotsna Bapat** (*Ph.D., Penn State University, USA*)

*jbapat@iiitb.ac.in*



Prof. Bapat received her Ph.D. from Penn State University. Her thesis was in the area of semi-blind equalization applied to communication systems. After graduation, she worked on de-sign and implementation of voice-band (V.34) and DSL (G.lite) modems at Ariel Corp and Lucent Technologies respectively. Her area of interest is Digital Signal Processing as applied to communication systems. In particular, she is interested in semi-blind identification as applied to OFDM systems.

**Debabrata Das** (*Ph.D., Indian Institute of Technology, Kharagpur*)

*ddas@iiitb.ac.in*



Prof. Das received his Ph.D. degree from the Indian Institute of Technology, Kharagpur (IIT Kharagpur). At present he is serving as Hewlett Packard Chair and Associate Professor at IIITBangalore. Before joining IIITB, he had served at G S Sanyal School of Telecommunication at IIT Karagpur and later at Kirana Networks in New Jersey, USA. At present he is PI of Department of Information Technology, Government of India Sponsored project on Green Broadband Wireless Net-work and a Nokia sponsored project in the area of Mobile Computing and Hewlett Packard supported on IP Multimedia Services (IMS). His areas of teaching interest are, Wireless Access Network, Mobile Computing with IMS and Internet-working. His main areas of research interest are Wireless Access Network's MAC, QoS, Power saving and IP Multi-media Subsystems.

Prof. Das has more than 45 peer reviewed papers in different journals and international conferences.

**K. V. Dinesha** (*Ph.D., Indian Institute of Technology, Bombay*)

*dinesha@iiitb.ac.in*



For the past 20 years, Prof. Dinesha has been involved in teaching, research and consultancy in Information Technology. He has been developing scientific and commercial soft-ware. His areas of interest include Software Engineering, Quality Systems (ISO and SEI CMM Models), Cryptography, Object Technology and Data Structures.

**Syamala Kalluri** (*Ph.D., Andhra University*)  
*syamala.kallury@iitb.ac.in*



Dr. Syamala Kalluri, PhD from Andhra University, taught till recently in Department of Humanities and Social Sciences, Indian Institute of Technology, Delhi. She taught courses in literature like Indian Writing in English, Modern Indian Fiction in Translation, Indian English Poetry in addition to teaching courses in Communication Skills and Technical Communication to technology students at IIT, Delhi.

**Manisha Kulkarni** (*Ph.D., Institute of Mathematical Sciences, Chennai*)  
*manisha.kulkarni@iitb.ac.in*



Professor manisha Kulkarni did her masters from Shivaji University, Kolhapur, Maharashtra and her PhD in the field of Number Theory from The Institute of Mathematical Sciences, Chennai. She worked on Galois Module Structure problems in Algebraic Number Theory for her thesis. After that she has been working in the field of Diophantine equations. She is also Principal Investigator of Department of Science and Technology sponsored project on the distribution of Galois groups and class groups. Her areas of interest include Diophantine equations, elliptic Curves, Galois groups and Class groups.

**Jayprakash Lalchandani** (*Ph.D., Indian Institute of Technology, Kharagpur*)  
*Jayprakash.lalchandani@iitb.ac.in*



JayPrakash joined the institute in January 2012. He completed his PhD in Computer Science (specialization: Software Engineering) from the Indian Institute of Technology Kharagpur (IITKGP) in 2010. Before joining IITB, he was associated as a post-doctoral researcher with the General Motors Collaborative Research Laboratory in the Department of Computer Science and Engineering at IITKGP. His current research interests include program and model analysis, testing, requirements engineering, etc.

**Meenakshi D' Souza** (*Ph.D., Institute of Mathematical Sciences, India*)  
*meenakshi@iitb.ac.in*



Prof. D' Souza did her Master's in Mathematics from University of Madras, Chennai and her Ph. D. in Theoretical Computer Science from The Institute of Mathematical Sciences, Chennai. She joined the research department of Honeywell Technology Solutions, Bangalore soon after completing her Ph. D. and worked there in the areas of Formal Verification of Software Design, Model Based Development and Physical Access Control. Her research interests are in Formal Methods, Model Based Development, Automata Theory and Enterprise Security. She is also interested in Research and Technology Strategy and Intellectual Property Rights Management.

**Nivedita Menon** (*Ph.D., Penn State, USA*)  
*nivedita@iitb.ac.in*



Niveditha Menon received her doctorate from Penn State University in Sociology and Demography with a minor in Women's Studies. Her broad areas of interest are gender, poverty, violence, community development, and research methodology. In particular, she has worked in the areas of local participatory development, rural poverty, and urban homelessness.

**V. N. Muralidhara** (*Ph.D., Indian Institute of Technology, Delhi*)  
*murali@iitb.ac.in*



Prof. Muralidhara has done PhD in Computer Science and Engineering at Indian Institute of Technology Delhi. His thesis was in the area of Algorithms. He has done M.Tech. in Computer Application at IIT Delhi and M.Sc. in Mathematics at University of Hyderabad. Before Joining IIIT Bangalore, he has worked as Research Associate at SERC, Indian Institute of Science Bangalore for few months. He is interested in the theory of algorithms and complexity, and its applications. More specifically, his broad areas of research interest include combinatorial optimization, approximation algorithms, randomized algorithms, on-line algorithms, cryptography, algebra and coding theory.

**Srinath R. Naidu** (*Ph.D., Eindhoven University of Technology, Netherlands*)  
*srinathn@iitb.ac.in*



Prof. Naidu obtained his B. Tech. degree from the Institute of Technology, BHU in 1996. After completing his Master's degree from the Indian Institute of Science, Bangalore in 1998 he went on to finish his Ph.D. in the area of statistical timing analysis for digital integrated circuits from Eindhoven University of Technology in 2004. After completing his Ph.D., he worked for Magma Design Automation Inc in the area of statistical timing analysis. His last work assignment before joining IIITB was with Cadence Design Systems in the area of low power synthesis. His research interests are mainly in the area of electronic design automation including statistical timing analysis and optimization for digital circuits, power analysis and optimization and formal verification. He is also interested in combinatorial optimization, and design and analysis of algorithms.

**Jaya Sreevalsan Nair** (*Ph.D., University of California, Davis, USA*)  
*jnair@iitb.ac.in*



Prof. Nair obtained her Ph.D. in Computer Science from University of California, Davis; after a B. Tech in Aerospace Engineering from IITM and a M.S. in Computational Engineering from Mississippi State University. Prior to joining IIITB, she worked as a scientific programmer at Enthought Inc. Austin and as a research associate at Texas Advanced Computing Center, University of Texas at Austin. Her areas of interest are scientific computing, scientific visualization, computer graphics, and computational geometry.

**Poonacha P G** (*Ph.D., Indian Institute of Technology, Kanpur*)  
*poonacha@iitb.ac.in*



Poonacha received B.Tech degree in Electronics and Communication Engineering from KREC (now known as NITK) Surathkal in 1978, M.Tech and Ph. D. degrees in Electrical Engineering from IIT Kanpur in 1981 and 1987 respectively. He is a Senior member of IEEE. He has been working in Signal and Image processing and digital communication areas for the past 24+ years which includes 10 years at IITB and 14 years in industry.

He was a faculty member in the EE Department at IIT Bombay between 1986 and 1996. During that period he taught PG level courses in the area of Digital communications, Adaptive signal processing and Neural Networks and worked as Principal as well as co-investigator on MHRD projects by government of India. He was with Sasken from 1996 to 2002. At Sasken he became Vice President of its R&D division in 2001, responsible for R&D initiatives and patents in the area of 4G wireless, MPEG7 and Software Defined Radio (SDR). He was also a member of the management council at Sasken in 2001. Prior to that, he was the head of 3G wireless program at Sasken responsible for development of 3G protocol stack and baseband. Before joining Epigon he worked as a Senior Technologist at Texas Instruments, Bangalore. He worked as Chief Technology Advisor and Director at Epigon Media Technologies from 2003 to 2011. At Epigon he worked on development of H.264 codec, Worldspace hybrid radio receiver, DAB receiver and OFDM based modem development.



Research Interests: Computer Vision Problems, Wireless Communications and Wireless Sensor Networks, Software Defined Radio, Neural Networks and their applications.

**Balaji Parthasarathy** (Ph.D., University of California, Berkeley, USA)

*pbalaji@iiitb.ac.in*



Prof. Parthasarathy obtained his Ph.D. from the University of California at Berkeley. His research broadly focuses on the relationship between technological innovation, economic globalization, and social change. Within this broad focus, his work follows two threads. One thread examines the impacts of public policy and firm strategies on the organization of production in the ICT (Information and Communications technology) industry. Another thread deals with "ICTs for Development," or ICTD. Here his interests lie in understanding how ICTs are being deployed in various domains of activity to transform social relationships, especially in economically underdeveloped contexts.

**Amit Prakash** (Ph.D., IIM Bangalore)

*amitprakash@iiitb.ac.in*



Amit's research and consulting interests are in the areas of Information Systems and Public Policy, particularly where they intersect with Development Sectors such as Public Health & Nutrition, Education & Skill Development and Livelihoods. Amit has a graduate degree in Civil Engineering from the Indian Institute of Technology, Roorkee and a doctoral degree in Information Systems from the Indian Institute of Management Bangalore.

**G. N. S. Prasanna** (Ph.D., MIT, USA)

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Prof. Prasanna did his B. Tech at IIT Kanpur, and MS and Ph.D. at MIT, USA. He has worked at Lucent Microelectronics and Lucent Bell Laboratories, for about 11 years. At Lucent he worked in a variety of fields, including VLSI, switching, optical networking, etc. He was responsible for the signal processing system design of a major access product for Lucent's 5ESS switch, accounting for 30 million lines world-wide. Recently his research interests have included optical networking and robust optimization. He has published about 35 papers, and holds about 15 patents. He has been on several technical program committees and has served as a referee for several journals. He is interested in communication systems (optical, wireless, power line), robust optimization, electromechanical systems, animation and mathematics.

**S. Rajagopalan** (Ph.D., Indian Institute of Technology, Kanpur)

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Prof. S. Rajagopalan received his B. Tech degree from IIT Delhi, PGDM from IIM Bangalore and Ph.D. from IIT Kanpur. He was the Chief Executive Officer of the Karnataka State Council for Science and Technology from 1982 to 1993 and was involved managing innovations that addressed the problems of Karnataka. In 1993 he along with a few colleagues founded Technology Informatics Design Endeavour (TIDE) a non-profit development society which focused on developing and disseminating technologies that are economically attractive, environmentally sustainable and socially acceptable in rural areas of Karnataka. He was its Chairman till 2007. For his work in TIDE, he was awarded the Ashoka Fellow (1994), Fellow of the Salzburg Seminar (1999), one of the four finalists of Social Entrepreneur of India award (2006) and one of the 50 pioneers of India chosen by India Today Magazine (2008). TIDE was awarded the International Green Oscar, the Ashden Award in 2008.

Prof. Rajagopalan has been working in the area of Geographical Information Systems since 1989 and founded a Company Spatial Data Private Limited in 1999. This company was pioneer in developing user-friendly digital maps of Indian Cities under the Brand Name Mapcue. Dr. Rajagopalan's areas of interest include innovation dissemination, economics of innovations, Geographical Information systems, and Economics of Information

Technologies. He also heads the IITB Innovation Centre, which aims at incubating and promoting innovations in the area of Information and Communication Technologies.

**Madhav Rao** (*Ph.D., University of Alabama, USA*)  
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purposes.

Madhav Rao completed his Masters in Microelectronics from University of Arkansas in 2007 and Ph.D in Electrical Engineering from the University of Alabama in 2012. His major research contribution involves developing a solder based self assembly technology for 3D integration of VLSI circuits. He has published multiple journal articles and has given multiple talks on the same in international conferences. His other research interests include fabricating CNT (Carbon nanotubes) in through silicon vias, developing nanomagnetic devices to emulate logic gates, and developing human readable audio for educational

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Prof. Ramanathan received his Ph.D. degree from Mississippi State University. His thesis was in the area of object-oriented databases. He has extensive application software development experience in large multinational organizations. Most recently, he was working as a senior architect at Hewlett Packard. His current focus is in the area of databases and software engineering. Application architectures, enterprise content management and knowledge management are his other areas of interest.

**Shrisha Rao** (*Ph.D., University of Iowa, USA*)  
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Prof. Rao obtained his Ph.D. in computer science from the University of Iowa, and also has an M.S. in logic and computation from Carnegie Mellon University. His primary re-search interest is in the area of distributed computing, specifically algorithms and formal methods for concurrent and distributed systems. He also has interests in problems such as distributed fair division and demand-side management. He occasionally dabbles in Mathematics. He is also a regular reviewer for the ACM Computing Reviews journal.

**S Sadagopan** (*Ph.D., Purdue University, USA*)  
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Professor Sadagopan, Director of IITBangalore, is a product of Madras University, India and Purdue University, USA. He taught for 25+ years at IIT Kanpur, IIM Bangalore, IIT Madras and IITBangalore in addition to short teaching assignments at RUTGERS, USA and AIT, Bangkok. He has wide research interests that include Operations Research, Multi-criteria optimization Decision Theory, Simulation, Enterprise Computing, Programming Languages, Databases, Multimedia and e-Governance. He has authored seven books, several book chapters and papers. He is also a Fellow of IEE (UK) and Computer Society of India. He is a Senior Member of IEEE, ACM and AIS.

Prof. Sadagopan consults widely across different industry segments (Auto, Manufacturing, Banking, IT and Social Sector) and lectures extensively at corporations, industry events and Universities in North America, South America, Europe, Middle East, Asia, Australia and New Zealand on all aspects of IT.

**Neelam Sinha** (*Ph.D., Indian Institute of Science, Bangalore*)*neelam.sinha@iiitb.ac.in*

Neelam received her PhD from IISc, Bangalore. Her thesis was on strategies for rapid MR imaging. Her previous stints include MILE Lab, IISc and MR Imaging group at GE Healthcare, Bangalore. Her research interests are in medical imaging and processing.

**Srinath Srinivasa** (*Ph.D., Berlin-Brandenburg Graduate School, Germany*)*sri@iiitb.ac.in*

Prof. Srinivasa holds a Ph.D. in Information Systems from the Berlin-Brandenburg Graduate School for Distributed Information Systems, Germany, and an MS from IIT-Madras. He works in the broad areas of web information retrieval, distributed computing, and modelling of non-linear systems. Currently, he is a member of various technical and organizational committees for international conferences, a life member of the Computer Society of India (CSI), and a member of the Board of Studies at Goa University. He is also the recipient of various national and international grants for his research activities.

**G Srinivasaraghavan** (*Ph.D., IIT Kanpur*)*gsr@iiitb.ac.in*

G. Srinivasaraghavan, PhD is a Partner at Performance Engineering Associates. He has a PhD in Computer Science from the Indian Institute of Technology Kanpur and has over 18 years of industry experience. At Infosys Technologies, India's premier IT firm, he was responsible for the delivery of large, performance-critical IT systems for Fortune 500 clients in the telecom, BFSI and logistics spaces. He has over a dozen published papers in several reputed international fora, including journal of Algorithms, International Journal on Computational Geometry and Applications and Foundations of Software Technology and Theoretical Computer Science. In his previous position he was Chief Technology Officer at Aztecsoft Ltd(now a part of Mindtree Ltd).

**Raghavendra V** (*Ph.D., IIT Kanpur*)*vrag@iiitb.ac.in*

Prof. Raghavendra V worked as a Professor in Indian Institute of Technology Kanpur, India. He received his Ph.D. degree in 1973 from Indian Institute of Technology Kanpur, India.

**Vinod Vyasulu** (*Ph.D., University of Florida, USA*)

Prof. Vinod Vyasulu has joined as an Advisor in the Centre for Information Technology and Public Policy (CITAPP) in the institute w.e.f. 1st January, 2013. He has Ph Ds (Latin American Studies and Economics) from University of Florida. His areas of interest include federal system, federal finances, especially the working of local governments, and the process of urbanisation. He has taught at the Universidad de las Americas in Mexico, Indian Institute of Management, Bangalore, and XLRI Jamshedpur.



## ADJUNCT / VISITING FACULTY

Many senior members from the Industry and Academia spend time at IITB as adjunct / visiting faculty members. Following are some of the adjunct / visiting faculty members at IITB:

Hema Krishnamurthy

Roland E Hass, Ph D

Shakeel

Gokul, Ph D

Tridib Roy Chowdhury

Subhajit Datta, Ph D

Shyamala Kamath

Muralidhar Koteswar

S. Nagarajan

Joy Prabhakaran

Eswarrao Potladhurthi

S Ramesh, Ph D

Venkatesh K

Revathi Shivakumar

A Srinivasan, Ph D

Abbas K Sutarwala

KRV Raja Subramanian, Ph D

Sunil Thulasidasan, Ph D

Eswar Subramanian, Ph D

Srini Ramaswamy, Ph D