

# **Director's Report**

**Ninth Convocation** 

Friday, 25 May 2007

Indian Institute of Technology Guwahati

Distinguished Chief Guest of the Convocation, the Honourable Chief Minister of Assam, Shri Tarun Gogoi, Chairman, Board of Governors, Dr. M. K. Bhan, members of the Board of Governors, members of the Senate, invited guests, graduating students, faculty and staff of the Institute, parents and guardians, ladies and gentlemen – I, on behalf of the Institute, welcome all of you to this Ninth Convocation of Indian Institute of Technology Guwahati.

I, on behalf of the Institute, take this opportunity to thank the Honourable Chief Minister of Assam for accepting our invitation to be the Chief Guest of this Convocation and for kindly giving his consent to deliver the Convocation Address.

IIT Guwahati has successfully completed twelve years. The campus of 700 acres which has about 2500 residents is growing, and it is expected that in five years' time, there will be 5000 residents. The alumni of the Institute have done very well, and they are well placed in organisations all over the world. Today, BTech, BDes, MTech, MSc and PhD degrees are going to be awarded to a total number of 422 students. I extend my congratulations to all the degree recipients.

Now I am going to present a report on the activities and achievements of the Institute during the year 2006-2007.

## THE BOARD

Shri Achyut Kumar Saikia completed his three-year term as the Chairman of the Board of Governors in September 2006. On behalf of the Institute, I wish to thank him for the care and dedication with which he guided us during his tenure. I would also like to thank the outgoing Board members, Dr. N. Pant, former member, Space Commission, Dr. B. P. Khandelwal, NIEPA, New Delhi, and Dr. S.C. Saha, NIT Agartala for their contributions.

### ACADEMIC ACTIVITIES

The Institute has 11 academic departments, 3 inter-disciplinary academic centres and 4 service centres. These are:

# Departments

Biotechnology (BT), Chemical Engineering (CL), Chemistry (CH), Civil Engineering (CE), Computer Science and Engineering (CSE), Design (DE), Electronics and Communication Engineering (ECE), Humanities and Social Sciences (HSS), Mathematics (MA), Mechanical Engineering (ME), and Physics (PH).

### Academic Centres

Centre for Energy, Centre for the Environment, Centre for Nanotechnology

#### Service Centres

Computer and Communication Centre, Central Instruments Facility, Centre for Educational Technology, Centre for Mass Media Communication.

The Institute offers academic programmes covering a wide range of science, engineering, and humanities disciplines. The Institute will start three specialised MTech programmes. Two in the Department of Civil Engineering are in Environmental Engineering and Transportation Systems Engineering, while one in Computer Assisted Manufacturing from the Department of Mechanical Engineering. A Masters programme in Design (MDes) will also be started from July 2007. Further, the Institute has converted its five year integrated MSc programme in Chemistry to a 4 year BTech programme in Chemical Science and Technology.

The total number of students on the rolls in the academic year 2006-2007 at the undergraduate, postgraduate and PhD levels was 1827. About 36% are post-graduate students. The detailed break up is given below:

### BTech/Bdes: 1049

4<sup>th</sup> Year (2003 Batch): 209 (BT-19, CE-31, CL-19, CSE-43, DE-16, ECE-42, ME-39)

3<sup>rd</sup> Year (2004 Batch): 234 (BT-22, CE-24, CL-21, CSE-50, DE-19, ECE-50, ME-48)

2<sup>nd</sup> Year (2005 Batch): 252 (BT-23, CE-27, CL-26, CSE-53, DE-15, ECE-53, Int.CH-7, ME-48)

1<sup>st</sup> Year (2006 Batch): 345 (BT-33, CE-50, CL-40, CSE-52, DE-24, ECE-48, MA-18, Int. CH-9, ME-54, PH-17)

From earlier Batches: 9

### Two Year MSc: 124

2<sup>nd</sup> Year (2005 Batch): 48 (CH-16, MA-16, PH-16) 1<sup>st</sup> Year (2006 Batch): 75 (CH-27, MA-22, PH-26)

From earlier Batches: 1

### Mtech: 357

2<sup>nd</sup> Year (2005 Batch): 153 (CE-26, CL-18, CSE-37, ECE-36, ME-36) 1<sup>st</sup> Year (2006 Batch): 199 (CE-38, CL-24, CSE-43, ECE-44, ME-50)

From earlier Batches: 5

### PhD: 297

(BT-25, CE-27, CH-51, CL-21, CSE-21, DE-5, ECE-30, Energy-7, Environment-7, HSS-23, MA-19, ME-33, Nano-5, PH-23)

The numbers of successful candidates who are to receive their BTech, BDes, MSc, MTech and PhD degrees today are as follows:

### BTech/BDes

Biotechnology: 18

Chemical Engineering: 18 Civil Engineering: 26

Computer Science and Engineering: 45

Design: 16

Electronics and Communication Engineering: 43

Mechanical Engineering: 45

Total: 211

### MSc

Chemistry: 16

Mathematics and Computing: 11

Physics: 13 Total: 40

#### MTech

Chemical Engineering: 11
Civil Engineering: 37

Computer Science and Engineering: 32

Electronics and Communication Engineering: 42

Mechanical Engineering: 33

Total: 155

## PhD

Chemistry: 6
Civil Engineering: 1

Physics: 2

Electronics and Communication Engineering: 1

Mechanical Engineering: 3

Mathematics: 3 Total: 16

Grand Total: 422

### ACADEMIC INFRASTRUCTURE DEVELOPMENT

The Computer and Communication Centre which is responsible for keeping the electronic communication and computation related facilities available to all the members of the Institute has upgraded various facilities and equipment during the year. A good number of high-end PCs were added to the Computer Laboratory. In order to meet the ever-growing Internet traffic, the Internet bandwidth has been enhanced to 13 Mbps (1:1). An additional 8

Mbps (1:1) bandwidth has been finalized, and we are considering to move to a 34 Mbps link next year. Internet facility has also been successfully extended to the residences of faculty and staff and to all the rooms of the Guest House. This has been done with the introduction of an ADSL based network access system through telephone lines, similar to the broadband services provided by BSNL.

The Central Library continues to grow in terms of its resources, facilities, and services. 7014 volumes of books and back-volumes were acquired leading to a total collection of about 86000. The amount involved on purchase of books was about Rs.1.25 crores. 388 periodicals were subscribed to and this involved an expenditure of approximately Rs.2 crores.

The Centre for Educational Technology (CET) is involved in a major national level project along with other IITs and IISc under MHRD, namely the National Programme on Technology Enhanced Learning (NP-TEL). Under this project, the Centre has already developed 15 web and 6 video courses. The video courses will be transmitted through Doordarshan Gyandarshan-III, also called the *Eklavya* Channel.

All the Departments and Centres have upgraded their laboratories by acquiring new sophisticated equipment for the purpose of teaching and research. Many new laboratories have been established. Some of the major equipment acquired by the Institute are:

- A Transmission Electron Microscope with accessories was purchased for the Central Instruments Facility at a cost of Rs.3 crores.
- A 128 CPU high performance computing system, was procured by the Computer Centre at a cost of Rs.1 crore.
- Vibrating Sample Magnetometer with accessories was procured by the Central Instruments Facility at a cost of Rs.98 lakhs.
- Atomic Force Microscope—Contact Mode with accessories was purchased by the Department of Biotechnology at a cost of Rs.54 lakhs.
- PC Controlled Ultramicrotome with touch screen and other accessories was procured by the Department of Biotechnology at a cost of Rs.42 lakhs.

### RESEARCH AND DEVELOPMENT

Research and Development is the most important component of the Institute's activities. Research is carried out by the faculty with PhD, Masters' and also some BTech students. With 297 PhD students, clearly, the Institute is well poised to make major contributions. The Institute also undertakes research and development projects under the categories of sponsored research projects and consultancy projects, in various areas of specialisation.

The Institute has generated about Rs.4.50 crores from sponsored projects. A total of 128 projects were carried out during the year. Out of these, 33 projects have been concluded productively. The Institute took up 31 new projects through its Departments and Centres. The projects were sponsored by government Departments / Ministries of Science and Technology (DST), Biotechnology (DBT), Atomic Energy, Environment, Information Technology, as also CSIR. Defence Research Labs, and BRNS. In addition to these sponsored R&D projects, the Institute also offered consultancy services to various State Government Departments, N. F. Railway, National Highway Authority of India, Oil and Gas Sector organisations, Construction and Infrastructure Companies, Power Sector units, Educational Institutions. Health and Pharmaceutical Industries and Financial Institutions. A total of 186 consultancy projects were carried out in the year. The total value of the consultancy projects undertaken is approximately Rs.1.25 crores. Much more needs to be done to increase the number of sponsored projects. The annual average amount per faculty received through projects is only Rs.2.6 lakhs. There is clearly scope to increase this.

Some of the research projects sanctioned during the year are given below:

- 'Electrospun nanofibre scaffolds for hepatic tissue engineering', a DBT sponsored project with a sanctioned amount of Rs.52.55 lakhs.
- 'Preparation and study of hydrogenated microcrystalline silicon thin films by hotwire chemical vapour deposition method for solar cell applications', (DST, Rs.51.22 lakhs).
- 'Dioxygen reactivities of mono-copper complexes with tridenatate N-doner ligands: Models for dopamine β-hydrooxylase and peptidylglycine α-hydroxylating monooxygenase', (DST Rs.23.77 lakhs).
- 'Study on free surface flow of concentrated suspensions', (DST Rs.20.56 lakhs).

- 'Design and optimization of a Circulating Fluidized Bed (CFB) biomass gasifier', (DBT, Rs.15.03 lakhs).
- 'Synthesis of biodegradable nanocarriers for targeted drug delivery', a DBT sponsored project with a sanctioned amount of Rs.12.4 lakhs.
- 'Seismic behaviour of pile groups in clay', a DST sponsored project with a sanctioned amount of Rs.10.68 lakhs.
- 'Information Security Education and Awareness', a MCIT sponsored project with a sanctioned amount of Rs.10.3 lakhs.
- 'Development of indigenous technology for fluoride free drinking water', a DRL, Tezpur sponsored project with a sanctioned amount of Rs.10 lakhs.
- 'Thermal analysis of a graphite heating chamber', a DRDL sponsored project with a sanctioned amount of Rs.10 lakhs.
- 'Cloning of the elite germplasm of jatropha for large scale plantation', a DARL sponsored project with a sanctioned amount of Rs.10 lakhs.
- 'Tracking the growth of soluble protein aggregates in real time using fluorescence and subsequent manoeuvres to inhibit their growth', a CSIR sponsored project with a sanctioned amount of Rs.10 lakhs.

IIT Guwahati is part of many national projects involving various organisations and institutions. I have already mentioned about NP-TEL above. A few others are:

- Under the MHRD sponsored project on 'National Programme on Earthquake Engineering Education' (NPEEE), a laboratory and library on earthquake engineering have been developed. Several short-term courses were conducted under the programme.
- Rural Technology Action Group for North East (RuTAG-NE) was established during 2005-2006 at IIT Guwahati to develop a network of Science and Technology Groups, Government Agencies and NGOs with a goal to provide R&D inputs to the rural sector. The project is running successfully.
- IIT Guwahati houses the Regional NBHM Library for the North East Region to facilitate studies of higher mathematics with grants received from the National Board for Higher Mathematics, Department of Atomic Energy, New Delhi.

The Technical Backup Unit (TBU) under the Khadi and Village Industry Commission (KVIC) with the objectives to initiate and strengthen rural industrialization through R&D support, and strengthening academics-industry linkage is operating effectively. Several activities and improved processes have been completed on non-conventional energy utilization, biogas, bamboo and cane craft and design and the development of a semi automatic loin loom.

### FACULTY AND STAFF

The faculty strength at the end of March 2007 was 176. This is an increase of 11 from 165 last year. 21 new faculty joined, but 10 faculty left the Institute. With all the IITs recruiting aggressively due to retirements and expansions, the turn-over is similar to last year, but we are on track to meet our growth targets of the next five years. The current student to faculty ratio is a healthy 10.4. Shortages however exist in Computer Science & Engineering and in Design. Besides faculty, we also have 23 scientific staff at present. The non-faculty staff strength has remained the same as the previous year at 253. A proposal to create more posts is pending with the Ministry for a long time, causing a lot of difficulties. A 'Recruitment and Career Progression Scheme' (RCPS) was introduced for Group B, C, and D staff in all the IITs this year. Under this, non-teaching staff are getting assured promotions after serving the necessary number of years.

Inter-IIT Staff Sports Meet

During 22-24 December 2006 IIT Guwahati hosted the 14<sup>th</sup> Inter-IIT Staff Sports Meet for the first time. There were five events namely athletics, table tennis, volleyball, football and badminton. Each IIT was represented by a contingent of around 35 participants. A total number of around 245 participants took part in this Staff Meet. IIT Kharagpur won the General Championship Trophy.

### HONOURS AND AWARDS

Several faculty members of the Institute have been awarded and honoured for their achievements in research, for getting fellowships and memberships of various associations and journals. Few of such achievements are:

- Dr. T. Punniyamurthy of the Department of Chemistry received UKIERI Research Fellowship 2006 to visit Oxford University.
- Dr. B. Mondal of the Department of Chemistry won the DAE-Young Scientist Research Award for 2006-2007.

- Dr. B. Singh of the Department of Civil Engineering won the IGS-ONGC biennial prize for the research paper titled 'Behaviour of suction anchors under pullout loading' awarded by Indian Geotechnical Society in December 2006.
- Dr. N. Sahoo of the Department of Mechanical Engineering has been awarded BOYSCAST Fellowship 2006-2007 to carry out research at the Centre for Hypersonics, University of Queensland, Brisbane, Australia.

## **PUBLICATIONS**

The faculty of the Institute has been actively publishing research papers in international and national journals as well as in conference proceedings. The publications during the past one year include:

Journal Papers: 288 Conference Papers: 289

Compared to the previous year there has been a significant increase both in the number of papers in journals (from 194), and in conference proceedings (from 215). This works out to an average publication of 3 papers per faculty. This is very satisfactory. We must maintain this level in the years to come.

### CONFERENCES/WORKSHOPS/SYMPOSIA/COURSES

Various conferences, seminars, workshops, and courses were organised by the Departments and Centres of the Institute during the year. A few of them are:

- The 2<sup>nd</sup> International Congress on Computational Mechanics and Simulation (ICCMS-06) was held during 8-10 December 2006.
- The 8<sup>th</sup> International Conference on Distributed Computing and Networking was organised by the Department of Computer Science and Engineering, during 27-30 December 2006.
- Symposium on Entrepreneurship in Biotechnology: Scope and Prospects in North East India was held during 20-21 January 2007. It was jointly organised by the Department of Biotechnology, IIT Guwahati and North East Chamber of Commerce and Industry.
- A Regional Seminar Awareness Programme on Intellectual Property Rights and Patents for Capacity Building was organised by the Department of Biotechnology during 15-17 September 2006. It was sponsored by the Ministry of Human Resource Development.

- Indo-Danish HCI Research Symposium was jointly organised by the Department of Design, IIT Guwahati, Copenhagen Business School (CBS), Denmark, and Chinese Academy of Sciences, Beijing on 14-15 May 2006. It was sponsored by the Danish Council for Independent Research through CBS.
- National Seminar on Peace in Dialogue: Reflections on North East India, was organised in collaboration with ICSSR-NERC during 1-2 February 2007.

Under the Quality Improvement Programme (QIP), 12 short-term courses were organised. These are:

- Recent Trends in Dam Engineering, Department of Civil Engineering.
- Green Chemistry and Green Technology, Department of Chemistry.
- Mathematical Techniques in Science and Engineering, Department of Mathematics.
- Fundamental Techniques in rDNA Technology, Department of Biotechnology.
- Application Specific Algorithms: Design and Analysis, Department of Computer Science and Engineering.
- Industrial Design Consideration in Plastic Products, Department of Design.
- Graphic Design Elements for Effective Communication, Department of Design.
- Hydroinformatics and its Application to Flood Management, Department of Civil Engineering.
- Recent Developments in Wastewater Treatment Using Anaerobic Reactors, Department of Civil Engineering.
- Biomedical, Speech and Image Processing, Department of Electronics and Communication Engineering.
- Rapid Product Development, Department of Mechanical Engineering.
- Training Programme on Matrix Computations and Applications, Department of Mathematics.

#### Other Short-Term Courses

The Institute organised various Capacity Building Programmes for the enhancement of knowledge, skill and understanding of specialised subjects for professionals from various government organisations and institutions. They are:

# Department of Civil Engineering:

- 'Recent Practices in Transportation Planning and Traffic Engineering', sponsored by MDONER (15-19 January 2007).
- 'Flood Hazard Mitigation and Watershed Management', sponsored by MDONER (1-5 December 2006).
- Water Quality Monitoring for Water Treatment Plant Operators of North-eastern States', sponsored by MDONER (26-30 June 2006).
- 'Computer Aided Seismic Design of RC Buildings', sponsored by MDONER (12-16 June 2006).
- Training Programme on 'Earthquake Risk Management' under NPCBEERM, sponsored by MHA, GOI (8-24 May 2006 – Phase I, and 19 June to 7 July 2006 – Phase II).
- 'Geoinformatics and its Application', sponsored by Centre for Geo-Spatial Technology, New Delhi (18-20 September 2006).
- 'Geotechnical and Highway Projects', a training programme in association with National Academy of Construction, Hyderabad (November 2006).
- 'Seismic Retrofitting of Reinforced Concrete Buildings: Conventional and Structural Control Based Approaches', sponsored by NPEEE (27 November to 1 December 2006).

# Department of Design

 'Training Course on Furniture Making to Barak Bamboo and Cane Pvt. Ltd., Silchar', sponsored by NMBA (1-10 March 2007).

# Centre for Energy:

- 'Lab Intensive Short-Term Course on Capacity Building for Micropropagation and Genetic Engineering of Biofuel Plants', funded by MDONER and Department of Biotechnology (15-20 January 2007).
- 'CNG and LNG Fuel Retro-Fitment in Automotive Engines', sponsored by MDONER (8-9 March 2007).

### CONSTRUCTION AND CAMPUS DEVELOPMENT

The following major works were either completed or under construction during the year:

# 1. Hostel Buildings

The construction of Boys' Hostel No. 6 with a capacity of 500 students is under progress. 240 rooms are expected to be ready by July 2007. The construction of Boys' Hostel No. 7 with a capacity of 500 was awarded in December 2006 and foundation work is under progress. The construction of the Married Scholars' Hostel with 108 flats has been completed.

### 2. Residential Quarters

Construction of 36 units of E type quarters in 6 blocks are in progress. 24 units are expected to be ready for occupation by July 2007 and the rest will be completed by March 2008. Construction of 30 units of D type quarters in 5 blocks is nearing completion. 12 units were completed and occupied in December 2006. The other 18 units are almost ready for occupation.

### 3. Lecture Hall Complex

The lecture hall complex comprising 4 lecture halls of 250 capacity each is under progress. Two halls are expected to be completed by July 2007 and the remaining two halls are expected to be ready by September 2007.

### 4. Auditorium

The Auditorium with a capacity of 1500 is nearing completion. The work is expected to be completed by October 2007.

# 5. Main Approach Road from NH-31 to IIT Guwahati Campus

The approach road of about 1.8 km to the Institute from the NH 31 including a four lane Railway Over Bridge is on the verge of completion. Two lanes of the road along with the bridge was completed and opened for traffic on May 2006.

# 6. Sports Complex

The Sports Complex comprising of one Indoor Stadium, Swimming Pool, and different outdoor sports fields has been completed. The 42<sup>nd</sup> Inter-IIT Aquatic Meet and the Inter-IIT Sports Meet hosted in October and December 2006 were successfully held in the Sports Complex.

# 7. Kendriya Vidyalaya

The construction of the Kendriya Vidyalaya building is nearing completion. Classes have already started in the new school premises.

# 8. Community Hall

The construction of one community hall for organising social functions and student activities has been completed and the other one will be completed by September 2007.

# 9. Water Supply

The Water treatment plant (with a capacity of treating 3,50,000 litres per hour) situated inside the campus which draws water for filtration and treatment from the Brahmaputra became functional in July 2006.

### 11. Electrical Works

**Power Supply:** Power supply in the campus is being provided through a 2 x 5.0 MVA, 33/11 KV sub-station and through nine 11/0.433 KV sub-stations located in different parts of the campus. Stand-by power supply is provided from two 1500 KVA, 11 KV DG sets which is accessible to all the 11 KV sub-stations through the main 11 KV distribution network.

Campus Lighting: Street lighting works in all the major streets of the campus have been completed. In view of the early sunset during winter, the outdoor sports fields of the Sports Complex have also been illuminated to provide opportunity to the students to play in the evenings. It may be mentioned that many outdoor sports events of the last inter IIT Sports Meet in December 2006 were successfully held under flood lights.

Air Conditioning: The Administrative Building of the Institute is fully air conditioned through packaged/ducted split air conditioners. The Academic Complex and the Library and Computer Centre Building have also been air conditioned from the 1800 tonne capacity central AC plant. Works for providing air conditioning from the same plant to the Auditorium and the Lecture Hall Complex are in progress.

### STUDENTS' ACTIVITIES

A new constitution of the Students' Affairs Council was approved this year. The highlight is the introduction of a Students' Senate. This provides a forum for the students to democratically take decisions in matters concerning them. It is also hoped that student problems such as discipline problems, ragging, adjustment problems by individual students will be handled by the students themselves to a large extent.

Student events organised during the year are:

# Inter-IIT Sports Meet and Aquatic Meet

During 13 to 20 December 2006, IIT Guwahati hosted the 42<sup>nd</sup> Inter-IIT Sports Meet for the first time. An Inter-IIT Aquatic Meet is held separately each year preceding the main Inter-IIT Sports Meet. The 42<sup>nd</sup> Inter-IIT

Aquatic Meet was held successfully at IIT Guwahati during 1-4 October 2006.

In this year's Inter-IIT Sports Meet, all the IITs competed altogether for eleven events. Around 900 participants took part in this Meet. IIT Madras won the General Championship Trophies for Men and for Women. With sports facilities in place, we expect good performances from our students from next year onwards.

# Alcheringa 2007

The annual cultural event of the Institute was organised during 2-4 February 2007. Some of the leading artistes of the country performed in this year's festival. Alcheringa has also been a platform to attract our alumni back to the campus to catch up with their memories. Alcheringa is now one of the most eagerly awaited annual events of this region. It has also proved to be a great experience for the students in event management.

### Techniche 2006

Techniche 2006, the IIT Guwahati annual national level technical festival was organised during 1-3 September 2006 and met with good success. There were participants from many colleges from all over India. Techniche is now undoubtedly the most popular rendezvous for exchange of technical know-how among the student community, especially of the North East. Technical events also included participatory interactive workshops, technical paper presentations for students, and online contests among many others.

Following are the other regular events organised by the students during the year:

Manthan the intra-IIT cultural festival Spirit the inter-college invitation sports competition

Spardha the annual sports meet the annual athletics meet Zest

The various clubs and societies under the Cultural Council including the Movie Club, the Fine Arts Club, the Literary Club, the Photography Club, etc. organised regular events and competitions. The Publication Sub Committee published Besides - the in-house students' magazine.

# Scholarships and Internships

299 undergraduate students (25% of UG and M.Sc students) received meritcum-means (MCM) scholarship for the year 2006-2007. This includes tuition waiver, besides a yearly allowance. Institute Merit Scholarships were awarded to 25 students.

Two first year ECE students have received scholarships from Bharati Foundation. GE Foundations has awarded scholarships to two MTech students. Philips is also supporting two M.Tech students. Besides, there are a number of assistantships from Govt. agencies such as CSIR. As you may be aware, the Institute provides assistantships to all regular, full-time M.Tech and PhD students. The Institute needs to get more support from industry to sustain the projected growth rate in student strength, particularly at the graduate level.

Every year a large number of our third year B.Tech students work as summer interns in industries, educational and R&D organisations all over the world. All students going abroad receive a stipend and travel support from their employers. Like other years, our students are currently engaged as interns in India, Europe, the US, Australia, and Singapore. A survey done this year reveals that 80 students (out of a batch size of 234) are working as summer interns in leading universities and research institutions in Europe. Besides learning to work in research projects, they are spreading the brand of IIT Guwahati all over the world.

#### Student Achievements

Dipto Dey, a student of Electronics and Communication Engineering, Shiva Rama Krishna Jaini, a student of Design, and Abhishek Rawat, a student Electronics and Communication Engineering won the First, Second and Third prizes respectively in MOTOFWRD 2006, the nationwide competition of the best depiction of the future of technology and communications, organised by Motorola. IIT Guwahati had the unique distinction of sweeping all the prizes. Our congratulations to all these students.

Ankur Pariyani, Abhigyan Gupta, Pallab Ghosh of the Department of Chemical Engineering won the 2<sup>nd</sup> Prize of the Chemical Weekly award of IIChE for best research paper published in a high impact factor international journal by an undergraduate chemical engineering student. Let us give a big hand to them too.

Shamit Shrivastava, a third year BTech student of the Department of Mechanical Engineering has received "Ignited Mind Scientific Research Award" for 2007 from the IMSR Council, Cambridge, USA. Shamit received this recognition for his research potential as demonstrated by his recent work in the fields of material sciences, nanotechnology and biomedical engineering. Congratulations Shamit.

### TRAINING AND PLACEMENT

The placement scenario at IIT Guwahati is getting better with every coming year and the year 2006-2007 has also witnessed very good campus

placement. A total of 78 companies participated in the recruitment for 386 available students (BTech-207 + MTech-135 + MSc-44).

Percentage of placement for most of the BTech branches has been above 90%. The placement of MTech branches also has been very good with 100% placement for Computer Science and Engineering. For BTech, 274 jobs were available for 207 students and for MTech 138 jobs were available for 135 students. The highest package offered to BTech students was Rs.32.27 lakhs per annum and the average package was Rs.6.16 lakhs per annum. Highest package offered to MTech students was Rs.11.39 lakhs per annum and the average package was Rs.5.11 lakhs per annum. The placement of students in the MSc programmes were not so good probably because relevant companies did not come to the campus seeing the small number of graduates. As student strengths increase, this will change. Needless to say, all students get jobs within 6 months of completing their programmes. The branch wise placement details are:

Placement data (branch wise) with percentage of students getting placed

Department	Under Graduate (BTech/BDes)				Post Graduate (MTech)			
	No. of Students	Total No. of Jobs	No. of Students Placed	% of Students Placed	No. of Students	Total No. of Jobs	No. of Students Placed	% of Students Placed
CSE	42	54	41	98%	34	37	34	100%
ECE	41	55	39	95%	33	35	31	94%
ME	39	57	38	97%	31	38	28	90%
CE	31	44	30	97%	21	16	14	67%
CL	20	24	19	95%	16	12	11	69%
BT	19	25	17	89%		10-4		
DE	15	15	12	80%	100	-		-
PH	15	3	3	20%	142			
CH	14	5	5	36%	-24			
MA (MSc)	15	9	9	60%	1695	-	-	<b>=</b> <del>+</del>
Overall Un	dergradu	ate (BT	ech + BD	es) placed	= 196/2	07 = 94	.69%	
Overall MTech placed					= 118/135 = 87.41%			
Overall MSc placed					= 17/44 = 38.64%			
Overall (BTech + MTech) placed					= 91.81%			

### CLOSING REMARKS

The Institute has maintained a growth rate this year, similar to earlier years. Student strength increased by about 17.5%. Infrastructure has also increased accordingly. The Institute had drawn up a plan of increasing the student strength to 3800 by the end of the 11th five year plan (March 2012), with an annual increase of about 17.5%. With the proposed introduction of reservation for OBCs, minor modifications were made, increasing the growth rate in the next three years to meet the requirements of the scheme. Even if the reservation scheme is delayed, the Institute needs to maintain its growth, as it is some distance away from a sustainable strength. We are therefore requesting the Govt. of India to allow us to continue with our growth plans. In fact, other IITs will reach a strength of 6500 and more by the end of the 11th plan. So to reach the level of the other IITs, this Institute needs to grow at similar rates in the twelfth plan period too. The Institute is therefore going to continue to witness growth over the next ten years at least. This is a healthy state of affairs, as growth brings in new faces, new opportunities, and new vigour. Growth, however, also requires time to be devoted to planning, building and acquiring. At the same time, the need to raise the level of research in the Institute, both in quality and quantity, is of prime importance. Faculty therefore have to work ever harder to meet all our needs. Fortunately, we have a young faculty and they will therefore be able to put in the extra effort. At the same time, the Institute is aware of the need to provide scope to the faculty for self development and for augmenting earnings. The Institute is committed to providing support for sponsored projects. Consultancies are encouraged as they provide much needed practical experience to the faculty and also provide a source of income. We have one of the most liberal LTC schemes and our support level for attending conferences abroad is among the best in the country. The Govt. of India is also seized of the matter of providing adequate compensation to researchers and we may be able to provide extra incentives provided our earnings from projects and consultancies increase. I urge the faculty to move ahead with confidence. Together we can move mountains.

The IIT Guwahati alumni base is growing. My dear graduating students, we need your support in the years to come. Please keep in touch with us. We are setting up an alumni portal and I urge you to keep us informed of your whereabouts. We have requested the alumni office bearers to open a chapter at Bangalore to begin with. Many of you are bound to that city and many of your seniors are already there. You could play a part in setting up a Bangalore chapter. I wish all of you success in life and I am confident you will excel in your careers and will so bring glory to IIT Guwahati.

Jai Hind.

Gautam Barua Director Indian Institute of Technology Guwahati