Vector Tech
magnitude & direction

EDITORIAL

Vector-Tech wishes all readers a new year orchestrated with high voltage, heritage of happiness, bloom of health, zoom of zeal, pampering prosperity and series of scintillating success, the likes of which were never witnessed before. May all seven stars in the Constellation, seven colours in the rainbow, seven *suras* of *Devi Saraswati's* lute, sweet dreams of going across the seven seas fill your life with the rarest of the rare jubilance.

The magnanimous management, the patronizing Principal, the sagacious seniors, the dedicated HODs, the devoted faculty and all other staff members look forward to witnessing the career-graph of our academic stalwarts further elevated to enviable heights of glory. We wish our budding engineers get a wider exposure at overseas seats of higher learning but let them not forget the duty they owe to the country of their origin and their affectionate *alma mater* and all associated with it.

This issue of *Vector-Tech* aims at showcasing the major achievements, developments and the events of the year 2007. The articles and information in this issue provide different voices and varying views to our readers.

I am sincerely grateful to Dr. Jyoti Sinha, Former coordinator CAEP for her encouragement and good company.

I am also glad for the delightful insights of our student editors, who have worked as hard as I have in producing this issue of *Vector-Tech*.

Warmest thanks to the members of the Governing Body, ITM, for their endless support and interest in *Vector-Tech*.

Happy Reading!

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VT is brought out under the aegis of Center of Academic Excellence & Planning

Faculty Development Program at ITM, Gurgaon

Dedicated to support the personal and professional growth of all faculty members, *Institute of Technology and Management Gurgaon*, conducts various **Faculty Development Programs** aimed at vitalizing the teachers, strengthening their knowledge, improving the quality of teaching and helping the institute to serve the society in a better way. The Faulty Development Programs are designed to train and develop the faculty members, equip them with skills and knowledge so that they can guide and motivate the youngsters more effectively. This program was aimed at providing inputs on process and practice of communication, inter-personal skills, creativity, problem-solving, etc. The objective of the Faculty Development Program is to bring together experts from academic institution, industries and research organizations engaged in teaching, research & development and growth of technologies.

From 8th to 13th of July 2007 **Institute of Technology and Management, Gurgaon** organized a teaching workshop, designed to hone teaching skills and make teachers better education-givers. This six day faculty development program was held by Centre of Academic Excellence & Planning (CAEP). This workshop conducted from 9 am to 4:30pm everyday, was very invigorating.

Ms. Vijaya Lakshmi Vishwanathan conducted a workshop in the institute. This workshop aimed at improving teaching effectiveness. The workshop also provided a forum to discuss of upgrading and renew skills such as teaching, research, administration skills etc. Teachers from different departments participated in this program. Ms. Deepti Gaur, Ms. Rashmi Verma, Mr. Sandeep Singh, Mr. Madan Singh, Ms. Suman Allawadi, Ms. Raminder Kaur, Ms. Suruchi Gera, Ms. Charu Gandhi, Ms. Arzoo Dahiya, Mr. Sumit Pandey, Ms. Jolly Shah, Mr. Saifullah Zaphar, Mr. Manoj Kumar, Mr. Ashwani Sharma, Ms. Anita Jain, Ms. Anita Sharma, Mr. Tarun Sachdeva, Ms. Ashu Sharma, Ms. Swati Jha, Ms. Prabhjyot Kaur, Dr. Sungeeta Singh, Dr. Sunil Kr. Mishra, Dr. Sheetal Mundra and Ms. Garima Dalal attended the workshop.

The first day of the workshop included the basic teaching aids and practices required for efficient and effective teaching. It also covered case writing, case presentation and case discussion. It stressed on improving the teachers' presentation skills and understanding the students' psychology. Classroom Control and creating intrinsic motivation were also discussed. Exploring different strategies to establish a good relationship with students, disruptive student behavior and identifying classroom management techniques were also practiced.

National Conference on "Recent Advances in Nano-science Nano-technology"

Institute of Technology and Management (ITM), Gurgaon is emerging as a leading contender for a world class institution which has contributed immensely towards promoting excellence in Engineering, Technological and Management education, designed and delivered to meet national needs and International standards.

Department of Applied Sciences and Humanities of the ITM, Gurgaon organized the conference "Recent Advances in Nano-Science and Nano-Technology" on October 6, 2007. The Chief Guest for the Conference was an eminent scientist Prof. D.P.Kothari of IIT, Delhi. The conference was chaired by the Principal of ITM, Prof. Rakesh Ranjan Professor A.P.Gupta and Professor Yogesh Mathur were the Convener and the Secretary of the Conference respectively. The basic aim of the conference was two fold : first to discuss various aspects of the recent developments in the field of Nano-Science and Nano-technology and its impact on the Industrial growth and second to provide a platform for both, experienced and young brains for the exchange of ideas on this encouraging area of research. The list of speakers included number of renowned experts from the University of Delhi, IIT-Delhi, National Physical Laboratory, New Delhi and other prominent institutions of the NCR region. Over all there were eight invited talks and sixteen research papers which indicated the tremendous interest which the field of Nano-Science and Nano-Technology has generated among the scientists all over the world and specially in India.

All in all, the conference was a great success and most of the participants were of the opinion that such conferences should be held on a regular basis.

National Seminar on "Knowledge Based Intelligent Engineering Systems"

Institute of Technology and Management (ITM) is an ISO 9001:2000 certified institution that was founded in 1996, to promote excellence in technical and management education by Educate India Society The Institute, which is spread over a lush, green 10-acre campus, provides an ideal learning environment with a clear and well defined mission, which can be achieved by the right kind of human resources, methodology, technology and commitment.

To meet its goal, ITM is determined to educate highly motivated students and encourages the youth to mould the inherent talent into skills required in the dynamic and highly competitive world of technology, and showcase their views through workshops & seminars.

We at ITM, Gurgaon are a pool of human resource dedicated to the development of human intelligence by irrigating it with innovative technical education. In this endeavor of ours we organized a National Seminar for students on Knowledge based Intelligent Engineering Systems (NSKBIES) on 30th October, 2007. This one day National seminar (NSKBIES) held by the Centre of Academic Excellence & Planning (CAEP) for the students and by the students at ITM. **Dr. Jyoti Sinha**, Coordinator CAEP, Assoc. Professor, Applied Science was the Faculty Incharge of this seminar and **Ms. Suman Chutani** Lecturer in CSE & IT Deptt. was the Convener of seminar. **Ms. Gunjan Pahuja** (Sr. Lecturer CSE & IT), **Ms. Jolly Shah** (Sr. Lecturer Mechanical) and **Ms. Roopal Mamtora** (Lecturer CSE & IT) were the coordinators of the seminar. **Prayank Malik, Kashish Jhamb, Yatin Nangia, Tanvi Rustagi, Deeksha Nayyar, Prateek Gupta** and **Abhishek Sahay** were among the student coordinators.

In the sequel of our endeavor NSKBIES-2007, it is planned to keep students abreast with the latest technology and to enhance their confidence by interacting with experts of the fields. This seminar will try to give a platform to students to learn, share and propose new ideas in the related field of Intelligent Engineering Systems.

There has been success with connectionist structures that approximate neural sub-systems of the brain; knowledge-based systems that demonstrate human-like reasoning; fuzzy paradigms that allow a degree of precision to be brought to situations where experts can offer only generalized advice; and genetic algorithms that inspired by biological evolution. Intelligent agents combine specific intelligent paradigms with conventional concepts of concurrent processing to provide synergetic combinations of communicating intelligent sub-systems.

No one can make you feel inferior without your consent – Eleanor Roosevelt

FROM THE DEPARTMENTAL DESK

Deptt. of ECE & EI // HoD: Prof. Swaran Singh Ahuja

New Faculty Members: Ms. Ashu, Ms. Nitin Sachdeva, Mr. Tarun Sachdeva, Ms. Anita Jain, Ms. Anita Sharma, Ms. Savita Sondhi, Mr. Arvind, Ms. Pooja Mohindru, Ms. Deepa, Ms. Chetna, Ms. Shilpi, Mr. Gurikbal Singh, Mr Mahesh Angira, Mr. Manish Mehta, Mr. Narendra Chauhan, Ms. Nistha Verma, Ms. Prabhjot Kaur, Ms. Shweta Arora, Ms. Shweta Ohri

- Departmental Magazine **"LIVE WIRE" Issue 2, Vol. No II** was published in the month of November.
- Mr. A.K. Nigam promoted as Professor and Mr. Manoj Pandey as Associate Prof.
- **Dr. Rakesh Ranjan published following papers:** a) **Optimal Conductor Selection of Radial Distribution Networks Using Fuzzy Adaptation of Evolutionary Programming**, International Journal of Power and Energy Systems, Vol. 26, No. 3, 2006. b) **A Novel Feedback Linearizing Statcom Controller for Power System Damping**, International Journal of Power and Energy Systems, Vol. 26, No. 3, 2006
- **Dr. Manoj Pandey published following papers:** 1) **A Fast and Robust Approach for Modeling of Nano Scale Compound Semiconductor for High-speed Digital Application**, Journal of Semiconductor science and Technology, vol 6, No. 3, September 2006. 2) **Pearson-IV Type Doping Distribution Based DM DG SOI MOSFET**, Microwave and Optical Technology Letters, vol.48, no. 4, April 2007
- **Faculty successfully completed Masters Degree:** Mr. Jitender Pathak, Ms. Savita Sondhi, Ms. Anita Sharma
- Mr. Nitin Malik & Ms. Roma Raina got enrolled in Ph.D. programme from Jamia Milia Islamia under the guidance of Prof. Rakesh Ranjan.
- **Following New Labs have been set up in ECE & EI Deptt.: i)** DSD Lab **ii)** Advanced Microprocessor Lab **iii)** Advanced Satellite Lab **iv)** Fuzzy Control & Optical Communication Labs are in progress.
- The Department under the ISTE banner has organized many events. Every month there are departmental E-Quizzes, Group Discussions, and Debates etc.
- On 1st & 2nd Nov., a National Conference on Teaching Learning Methods Titled as Class Room Teaching and Educational Technolgoy was held .
- **Academic/Career Achievements: i)** Many students are among the top ten list of university rankers in Electronics & Instrumentation Branch. **ii)** Placement of students of batch 2007. ECE-39 placed till date. EI - 25 placed till date. Highest Salary offered 3.5 Lacs per annum.
- **Mr. Jagdish Shivhare presented following papers: a)** "High Temperature Super Conductive Devices" in Oct. 2006 at Rajasthan University. **b)** "The Role of Carbon Nanotubes in Design and Development of Microwave Nano Devices" in Nov. 2006 at IEEE conf. Hong Kong. **c)** "Nanotechnology - Our Gateway to Everything in 21st Century" in Nov. 2006 at IEEE conf. Hong Kong. **d)** "Nanotechnology"- A Reshaping Technology in 21st Century" at ISCA conference in Dec. 2006. **e)** "Carbon Nanotubes"- A Major Break Through in Nanotechnology" in Dec. 2006 at ISCA conf. He attended International conf. & EXPO-2006 organized by ISTE & By BES at N.D. He has also obtained Ph.D. from Belford University, Texas U.S.A. in Aug. 2006.
- ECE & EI Department have organized many events for students like Quiz, Debate, Technical Presentations, Brainteasers, Say Writing, Group Discussions etc. under the SEE activities.
- Educational Tour for ME students was organized.
- Value addition activities for 3rd year Students were conducted.

International Journal Papers:

1. Alok Kushwaha, M. K. Pandey and A. K. Gupta, **"Pearson-IV type Doping Distribution based Analytical Modeling of Dual- Material Double-Gate Fully-Depleted Silicon-on-Insulator MOSFET (P-IV DM DG FD SOI MOSFET)"**, Microwave and Optical Technology Letters, Vol. 48, April 2007.
2. Alok Kushwaha, M. K. Pandey and A. K. Gupta, **"Analytical Characterization of Drain Current, Transconductance and Channel-Resistance in Pearson-IV type Doping Distribution based Dual-Material Double-Gate Fully-Depleted SOI MOSFET"**, International Journal Semiconductor Technology and Science, Vol. 7, No. 2, pp-110-119, June 2007.

Books Published: 1. Multimedia Systems by Manoj K Pandey, S.K. Kataria and Co. **2.** Schaum's series on Signals and Systems by H.P.Hsu and **Rakesh Ranjan** from **Tata Mc-Graw Hill, India**

Deptt. of Applied Science & Humanities // H.O.D.: Prof. A.P. Gupta

New Faculty Members (Joined after May, 2007): 1. Prof. Rajan Rai **2**. Dr. Divya Agarwal **3**. Dr. Sanjeev Kumar Singh **4**. Dr. Nagender Singh Tomar **5**. Mrs. Anjali Singh **6**. Mrs. Pranti Purohit **7**. Mrs. Komal **8**. Ms. Ruby Gupta **9**. Mr. Phool Singh **10**. Ms. Divyabha

Latest News in the Department: A short term training course: "**High Impact Presentation Skills Dec., 25-26, 2007**" at ITM attended by Two Faculty member: Prof. Y.K. Mathur and Dr. Hukum Singh.

Research Papers published by the Faculty: 1. A Research Paper "Asymmetric Vibration of Polar Orthotropic Annular Plate with Free Outer Edge" Prof. A.P. Gupta and N. Bhardwaj accepted in Conference to be held on Feb. 7-8, 2008, Roorkee **2**. A Reseach Paper "A New approach to integral Transform" G.C. Shukla and Y.K. Mathur, accepted in International Conference in Pantnagar on Dec. 19-22, 2007. **3**. A Research paper "The Role of Transformation in Solving Linear Programming Problem" accepted in International Conference in Pantnagar on Dec. 19-22, 2007. **4**. A Research Paper "Effect of Variable Viscosity on Convective Heat Transfer Along an Inclined Plate Embedded in a Porous Medium with an Applied Magnetic Field" accepted in International Conference in Pantnagar on Dec.19-22, 2007. **5**. A Research Paper "Image Compression Using the Discrete Cosine Transform", accepted in International Conference in Pantnagar on Dec. 19-22, 2007. **6**. A Research Paper "On Huard Type Cecond-order Converse Duality in Nonlinear Programming", by T.R. Gulati and Divya Agarwal, Applied Mathematics Letters, Volume 20, Issue 10, October 2007, Pages 1057-1063 **7**. A Research Paper "Sufficiency and Duality in Multiobjective Programming Under Generalized Type I Functions" by T.R. Gulati and Divya Agarwal, Journal of Optimization Theory and Applications, Volume 135, Number 3, 411-427 December, 2007 **8**. A Research Paper "Second Order Duality in Multiobjective Programming Involving (F, a, r, d)-V-Type I Functions" by T.R. Gulati and Divya Agarwal, Numerical Functional Analysis and Optimization, Volume 28, Issue 11, November 2007, pages 1263 -1277 **9**. A Research Paper By Y.K. Mathur "Color Glass Condensate and QGP" Physical Review D 0706193 (2007) **10**. A Resarch Paper R.B. Bajpai "Synthesis of 11-Membered Heterocyclic Compounds", is accepted for oral presentation in the 44th Anual Convention of Chemists 2007, to held at Mahatma Gandhi Institute of Applied Sciences, Jaipur, organised by Indian Chemical Society, December 23-27, 2007. My Abstract No. is ORG (OP)-96

Departmental Magazines/Journals: Vani, Shodh

Academic Achievements of the Faculty: Prof. A.P. Gupta & Dr. Neeraj Bhardwaj were awarded Rs. 10,000/ each for publishing two International Research Papers.

Events Organized by the Department: A Conference on "**Recent Development on Nano-Science & Technology**" organized in the Department of Applied Sciences & Humanities on 06 Oct., 2007.

Feedback of HOD for the last two issues of Vector-Tech: Well organized collection of News of ITM.

Deptt. of CSE \ IT // H.O.D.: Prof. Ranjit Biswas

New Faculty Members: 1. Prof. Deepak Dahiya, Professor **2**. Ms. Pariza Kamboz, Asst. Professor **3**. Dr. Latika Singh, Sr. Lecturer **4**. Mr. Sachin Bhardwaj, Sr. Lecturer **5**. Md. Akhtar, Sr. Lecturer **6**. Mr. Pradeep Kumar, Sr. Lecturer **7**. Ms. Shilpy Bhardwaj, Sr. Lecturer **8**. Ms. Shashi Prabha, Sr. Lecturer

Latest News in the Department: Another new Post Graduate Programme M.Tech. in Software Engineering has been started this year.

Research Papers Published in 2007: 1. Smita Rajpal, M.N. Doja and Ranjit Biswas, A Method of Vague Search To Answer, Queries In Relational Databases, accepted for publication in "INFORMATION: An International Journal". (likely to appear in Vol.10, No.6. 2008). **2**. Hakimuddin Khan, Musheer Ahmad and Ranjit Biswas, On Vague Groups, International Journal of Computational Cognition, accepted for publication (in Press). Likely to appear in Vol.5, No.1, March 2007 **3**. Hakimuddin Khan, Musheer Ahmad and Ranjit Biswas, Vague Relations, International Journal of Computational Cognition, accepted for publication (in Press). Likely to appear in Vol.5, No.1, March 2007 **4**. Inderjeet Kaur, Kanchan Sharma, M. Kulkarni, Asok De "Inter Carrier Interference Cancellation for OFDM Systems Using Self Cancellation Scheme", proceedings in the International Conference on Information Processing (sponsored by SIP & UVCE Bangalore, August 10-12, 2007); ed L.M. Patnayak et al I.K. Publications, pp 373-380 **5**. Inderjeet Kaur, Kanchan Sharma, M. Kulkarni "Orthogonal Frequency Division Multiplexing: An Overview" proceedings in the National Conference on Digital Information Management (sponsored by CSI & TSEC Mumbai, March 23-24, 2007); ed. Anjali Malviya et al K. Raheja Universal Series pp II 53-57 **6**. Kamal Thakur, Inderjeet Kaur, M. Kulkarni, Asok De

"OFDM: BER Performance by Cyclic Prefix Length", abstract of proceedings in IMS-2007, (Indian Microelectronic Society), Trends in VLSI and Embedded Systems (Sponsored IEEE Chandigarh, August 17-18, 2007); ed. J.N. Roy et al Macmillan India Ltd. ISBN 0230-63383-8 pp 425 **7**. Kanchan Sharma, M. Kulkarni, Inderjeet Kaur, Asok De "ICI Self-Cancellation for OFDM Systems", proceedings in International Conference on Modelling and Simulation (sponsored by CSIR); CITICOMS 2007 (Coimbatore Institute of Technology, Coimbatore, August 27-29, 2007); ed. S.R.K. Prasad et al Allied Publishers Pvt. Ltd., Chennai, ISBN 81-8424-219-0, pp 1080-1086 **8**. Inderjeet Kaur, Kanchan Sharma, M. Kulkarni, Asok De, "The COFDM Modulation System : The Heart of Digital Audio Broadcasting" accepted in International Conference on Advances in Computer Vision & Information Technology (Sponsored IEEE), ACVIT'07, November 28-30, 2007, organized by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS), India **9**. Inderjeet Kaur, Kamal Thakur, Kanchan Sharma, M. Kulkarni, "A Dual Mode Uplink and Downlink Scheme for WiMAX" proceedings in in International Conference on Computational Intelligence & Multimedia Applications-2007 (Sponsored IEEE, MEPCO), ICCIMA'07, IEEE CS, December 13-15, 2007, ed Arivazhagan S et al, 0-7695-3050-8/07, DOI 10.1109/ICCIMA.2007.134 pp-347-351, organized by Mepco Schlenk Engineering College, Sivakasi, India **10a**. Sachin Bhardwaj, Dae-Seok Lee, Wan-Young Chung, "A Combined QRS-Complex and P-wave Detection in ECG Signal for Ubiquitous Healthcare System" International Journal of KIMICS, Vol.5, No.2, June 2007, SOUTH KOREA. **10b**. Dae-Seok Lee, Sachin Bhardwaj and Wan-Young Chung, "Evaluation of Functional Sensor Node for Ubiquitous Healthcare System" The Second International Symposium on Medical Information and Communication Technology, 2007.12.11-13, Oulu, FINLAND **11**. Sachin Bhardwaj, Dae-Seok Lee, S.C. Mukhopadhyay and Wan-Young Chung, "A Fusion Data Monitoring of Multiple Wireless Sensors for Ubiquitous Healthcare System", 2nd International Conference on Sensing Technology, 2007.11.26-28, Palmerston North, NEW ZEALAND **12**. Dae-Seok Lee, Sachin Bhardwaj and Wan-Young Chung "A New Concept of Healthcare Parameter Analysis on Sensor Node for Ubiquitous Healthcare System" International Conference of Convergence Information Technology, IEEE CS proceeding, 2007.11.21-23, Gyeongju, SOUTH KOREA **13**. Dae-Seok Lee, Sachin Bhardwaj, Esko Alasaarela and Wan-Young Chung "An ECG Analysis on Sensor Node for Reducing Traffic Overload in U-Healthcare with Wireless Sensor Network" IEEE Sensors 2007, 2007.10.28-31, Atlanta, Georgia, USA **14**. Sachin Bhardwaj, Dae-Seok Lee and Wan-Young Chung "An ECG Signal Processing For Ubiquitous Healthcare System" International Conference on Control, Automation and Systems, IEEE proceeding, 2007.10.17-20, Seoul, SOUTH KOREA **15**. Wan-Young Chung, Sachin Bhardwaj, Amit Purwar, Dae-Seok Lee and Risto Myllylae "A Fusion Health Monitoring and Analysis with ECG and Accelerometer Sensors for Elderly Person at Home" 29th Annual International Conference of the IEEE EMBC 2007.8.23-26, Lyon, FRANCE **16**. Dae-Seok Lee, Sachin Bhardwaj, Wan-Young Chung "U-Healthcare System Using Wireless Sensor Network to Detect QRS Complex" Processing of KISPS Summer Conference 2007, pp.156-159, 2007.6.23, Ulsan, SOUTH KOREA **17**. Sachin Bhardwaj, Dae-Seok Lee, Wan-Young Chung "A ECG Analysis with Activity Monitoring for Healthcare of Elderly Person", Proceeding of KIMICS Conference, 2007.06.01-02, Jinchu, SOUTH KOREA **18**. Sachin Bhardwaj, Dae-Seok lee and Wan Young Chung, "Ubiquitous Computing Environment for Healthcare of Elderly Person at Home/Hospital" The Journal of Computer Science and Information Technology, 0973-4872, Vol.5, No.1, Jan-Jun 2007,INDIA **19**. Pardeep Kumar, Kashish Jhamb and Sachin Bhardwaj, "A seamless Efficient handover Mechanism for Mobile Network" The Journal of Computer Science and Information Technology, ISSN 0973-4872, Vol.5, No.1, Jan-Jun 2007, INDIA **20**. O.P. Sharma, V. Janyani, S. Sancheti and Sachin. Bhardwaj, "Channel Modelling and Security Issues for Wireless Healthcare System", The Journal of Computer Science and Information Technology, 0973-4872, Vol.5, No.1, Jan-Jun 2007, INDIA **21**. Sachin Bhardwaj, Dae-Seok Lee, Wan-Young Chung, "An ECG Monitoring and Analysis Method for Ubiquitous Healthcare System in WSN" International Journal of KIMICS, Vol.5, No.1, March 2007, SOUTH KOREA **22**. Poster Presentation at International Conference cum Workshop on "Nano Sciences and Nano Technology" By Mr. Ezaz Ahmed and Mr. Sumit Pandey **23**. Ezaz Ahmed, Sumit Pandey" Appliactions of Nano Technology in Electronics and Computer" Proceedings of Conference On: Recent Advances in Nano-Science and Nano-Technology", October 6, 2007, INDIA.

Books Published in 2007: List of Study Material prepared by Mr. Varun Kumar during 2007 is as: • Data Mining and Data Warehousing, MCA-505, Guru Jambheshwar University of Science & Technology, Excel Books, New Delhi. • High Speed Networks, MS-34, Guru Jambheshwar University of Sc. & Tech, Excel Books, New Delhi.

Academic Achievements of the Faculty Members: Faculty Members got registration in Ph.D. Programme are: Ms. Deepti Gaur, Ms. Smita Rajpal, Ms. Charu Gandhi, Ms. Inderjeet Kaur and **Faculty Members applied for registration** in Ph.D. Programme are: Mr. N.N. Das, Ms. Usha Batra, Ms. Gunjan Pahuja **iv**. Ms. Suman Allawadhi

International/National Conference/Seminar/Workshop attended by the Faculty Members: Workshop on "**Networking and Simulation**" held on 28th September 2007, organized by DellSoft Technologies in Collaboration with IIT Delhi at IIT Delhi. Attended by Mr. Varun Kumar and Ms. Suman Allawadhi

Academic Involvement of the Faculty Members: Information corresponding to this is given on the page no. 5-8

Journals/Magazine published by the Department: "VOYAGER" - The Journal of Computer Science and Information Technology, ISSN: 0973-4872, Vol.5, No. 1, Jan-Jun 2007. "DOSSIER" - The Students' Magazine of Computer Science Engineering and Information Technology Department, Vol-1, Jan-Dec 2007.

Deptt. of Mechanical Engineering & Automobile // H.O.D.: Prof. B.C. Nakra

New Faculty Members (Joined after May, 07): Mr. Santanu Sur, Asst. Prof. & Mr. Bharat Bhusan, Lecturer.

Latest News in the Department: A team of students of Mechanical & Automobile Engineering Department "Techie Tyros" had been amongst the selected 26 teams all over the country in the Mini Baja "**All Terrain Vehicle**" design competition. Our students were awarded 10th Rank in the prestigious tournament (Ranked 2nd in North Zone).

Research Papers Published in 2007: 1. Prof. B.C. Nakra had delivered invited lecture on "Trends in Mechatronics" at NSITMAE, ITM, Gurgaon in Jan. 07 **2**. Prof. K.K. Chowdhary had presented "Predictive Techniques for Vehicular Exhaust Pollution Dispersion in an Isolated Street Canyon" at NSITMAE, ITM, Gurgaon in Jan. 07 **3**. Dr. M.N. Deshmukh & Mr. Farrukh Hafeez had jointly presented pape on "Prediction of Yield Strength Using Miniature Specimen Techniques" at NSITMAE, ITM, Gurgaon in Jan, 07 **4**. Ms. Jolly Shah had presented paper on "Position Control of 3-link Robot by Using Metlab" at NSITMAE, ITM, Gurgaon, Jan, 07 **5**. Ms. Jolly Shah had presented paper on "Comparison of Finding Bottlenecks for AGV System" at TIME- 2007, Hyderabad in Mar, 07 **6**. Ms. Jolly Shah & Ms. Hiral Parikh had presented paper on "Comparison of Bottleneck Detection Methods for AGV System" in National Seminar at Deccan College of Engineering & Technology, Hyderabad in Mar, 07

Faculty Members' Academic Achievements: Mr. Prahlad Singh and Mr. Saifullah Zaphar are pursuing Ph.D.

Events/Seminars/Conference organized by the Department: 1. A Presentation on 5-axis Robot Arm was given by Mr. Ankur Aggarwal from Anshuman Tech. Pvt. Ltd., Delhi **2**. A Presentation on Robot Kit, Platform Kit Line Tracing Kit, etc. was given by Mr. Ajay Jain from Pravak Cybermetics Pvt. Ltd. **3**. A Presentation on Flexible Manufacturing System was given by Mr. P.K.B. Venkatesh from Mat Lab Engineers Pvt. Ltd. **3**. A Training Programme on MS- Office was organized for Technical Staff in June, 07 **4**. Departmental Seminars are arranged on almost every first Saturday of the month.

International/National Conference/Seminars/Workshop attended by the Faculty Members: 1. Faculty Development Programme attended by Mr. Manoj Kumar, Ms. Jolly Shah, Mr. Aswini Sharma and Mr. S. Zaffar in June, 07 **2**. Prof. B.C. Nakra, Prof. K.K. Chowdhary, Dr. M.N. Deshmukh and Ms. Jolly Shah read papers and attended NSITMAE Seminar at ITM, Gurgaon in Jan, 07. **3**. Ms. Jolly Shah read paper and attended Seminar at TIME-2007 in March, 07 **4**. Ms. Jolly Shah read paper and attended National Seminar at Deccan College of Engineering & Technology, Hyderabad, in March, 07.

Academic Involvement of the Faculty Members: 1. Prof. B.C. Nakra delivered three special lectures on " Vibration Causes, Effects and Control" at Indian Institute of Technology, Delhi in August, 07 **2**. A Joint Paper was presented by Prof. B.C. Nakra on "Inverse Differential Motion of Manipulator by Soft Computing Technique in Seminar on Soft Computing Techniques, MAIT, Delhi in Dec, 07 **3**. Dr. O.P. Chawla had delivered lecture on "Energy Conservation and Waste Heat Recovery" in Energy Centre, IIT, Delhi for QIP in Dec, 07 **4**. Prof. K.K. Chowdhary had undertaken Consultancy Project of "Wind Tunnel Test of Model of 220m High Chimney" for Budge Budge Thermal Power Station in Oct, 07 **5**. Prof. K.K. Chowdhary delivered lecture on "Environment Air Pollution Studies" and "Wind Effect on Structures" at ITM, Gurgaon in June, 07 **6**. Prof. K.K. Chowdhary made a Presentation to the engineers of Simplex Infrastructure, Kolkata on the "Aerodynamic Testing of Chimney Models" in July, 07

Journals/Magazines Published by the Department: The Department brings out a Biannual Journal "Impulse".

Feedback of the last Vector-Tech: The News clipping of NSITMAE held on 5-6th Jan, 07 organised by the Department of Mechanical & Automobile Engineering of ITM, Gurgaon and Centre for Academic Excellence and Planning did not mention the efforts and contribution made by the Department.

Suggestions: In future the News to be published on the Special Events organized by any Department should be involved in drafting such news items.

The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn — Alvin Toffler

FORTUNE FAVOURS THE BRAVE

Success, ultimately, essentially and above everything else, depends upon the stamina of your mind, your will power, dedication and perseverance. The starting point of success truly then, is optimism and hope, positive thinking and faith in yourself. Life is what you make it. Your tomorrow depends essentially on what you do today. Whether winning a bride or a battle, fame or fortune, power or position, wealth or worldly goods; success in life depends upon proper planning and execution of the plan. If success is to come to you, you must do your part to encourage it. Fortune favours the brave. With knowledge & preparation, you can meet any challenge and reach your goal. With courage and conviction, you can conquer fate and shape your destiny as you wish.

A foolish person seeks success in the distance, but the wise one grows it under his feet. Giving public credit to one who has earned it is the best success technique in the world. Be on the look out and catch people doing something right; then tell everybody about it. Never find fault, instant always find a remedy. The man who offers an insult writes it in sand, but for the who receives it, it is chiseled in bronze. Knowledge is power. Proficiency and competence galvanize people and make them look up to you for guidance and direction. Appearance and manner count. Talk and look like a winner. People don't follow leaders who lack direction and determination. The beginning is the most important part of the work. Once you start, it gets easier all the time. The way to succeed is to start sooner, work harder and know more than your competitors. Well done is better than well said.

Take a look at the success graph of Wipro Chairman Azim Premji, a unique epitome of pragmatic action, dynamic vision and unwavering determination - all fuse together into a sublime individuality. His is a life which can be read as an invaluable text offering insight into how a person with a humble beginning can go onto become an unparalleled moving spirit, an outstanding trendsetter, an ennobling pioneer for a whole epoch of innovation through his sheer ability to explore the terrains of excellence with a missionary zeal. It is his passion for success coupled with the perfection of vision that earned the IT stalwart, a place of enviable distinction in the Forbes' Top 10 list of Global Tech Billionaires.

How a man does what he does, determines whether he will get out of it maximum results with minimum input. The how of work constitutes its techniques; it is know-how. Getting superior results, art of utilizing the same resources and materials, manpower, money, time, and effort more skillfully, is technique. What turns ordinary into extraordinary is the extra we put into it. A champion puts all he has into every punch. The best way to rise above the crowd is to do the ordinary with extraordinary enthusiasm.

Put your shoulder to the wheel and work hard. Do not waiver, do not hesitate, do not doubt, but keep going. There is no shortcut to success and distinction. It is by the sweet of your brow, you will earn your bread. To reach the summit, you have to tread the ways and walk up. To stay at the top, you will have to toil twice as hard. Nothing is impossible. Everything is possible to him that believeth. Take heart, be bold and open a new chapter of your life. Let your watchword be optimism, action, achievement and success. Dedicate your energies, imagination, intellect, resources and time towards realization of your chosen worthy and cherished goal. One step at a time and that, well placed, will guarantee your victory.

- Paryank Malik, Final Year, ME

SAE COLLEGIATE CLUB ITM

Society of Automotive Engineers (SAE) International was established to offer common technical design solutions, engineering standards and a venue for free exchange of ideas to increase individual knowledge with resultant improvement in the automobile, new space and off highway industries. SAE is recognized on the world's premier mobility engineering society with nearly 90,000 members in more than 90 countries across the globe for student's development and commitment to lifelong learning. We feel immense pride in admitting that SAE Collegiate Club ITM has been a member of SAE for the last 9 years with an ever increasing member list to a present number of 195. The society is being guided by **Prof. J.K. Gera (Faculty Advisor)** along with a team of students coordinated by **Pryank Malik (President), Ayush Saxena (V.P.), Piyush Goel (Secy), Sumit Verma (Treasurer)**, in promoting technical knowledge beyond the college curriculum. It provides a platform for hand on experience by conducting design contests, workshops, seminars, quiz contests, industrial visits, inter-college meets and contests, participations in student conventions, providing opportunities to student members to express their views and developing networking which enables them to be eligible for being considered for national as well as international awards.

Here creativity is given a boost and engineers are given problems that allow them to think out of the box. The vision of the society has been given as: To Continuously Enrich Knowledge Base of Practitioners in Mobility Industry and Institutions in the Service of Humanity.

SAE members combine their specialized abilities to further advance the research, development, design, manufacturing and utilization of vehicles which operate on land, water, air and space.

SAE Collegiate Club ITM has organized a lot of events for the students of all disciplines in the college. The events include Technical Quiz, Management Quiz, Technical Paper Presentations, All Terrain Vehicle Competition, AutoCAD designing etc. being conducted by the team members of SAE ITM - **Dhwani Chutani, Ritika Vig, Abhinay and Ujjwal Gupta (Joint Secretaries)**.

The recent such activities where our members participated are : • Annual conference at IIT Delhi on 7th January, 2008 • SIIMC 2008 (SAE India International Mobility Conference), Indian Habitat Centre, New Delhi on 9th, 10th, 11th January, 2008.

- Paryank Malik, President SAE ITM, Final Year Mechanical

THE TOY CAR

Last year, "THE TECHIE TYROS", a team comprising of 16 students from the Mechanical Department of our college designed and manufactured an all terrain vehicle after being selected amongst 27 national teams for the prestigious Mini Baja event under S.A.E India.

The event took place from 21st- 23rd Dec 2007 at NATRAX facility of NATRIP, Pithampur, M.P.

The event aimed at inculcating engineering and entrepreneurship skills among the students and a platform to showcase their potential. The event took place for the first time in India and was classified as an engineering project rather than merely being a race. The track prepared for the event was 3.6km with hurdles like bumps, loose sand, mud patches, sharp turns, obstructions etc. The vehicle was to survive rough terrain and was to be judged on the basis of design report, cost report, sales presentation, design evaluation, acceleration, maneuverability, innovation and a 57.6 km endurance run.

Our vehicle "The Toy Car" finished the event securing 10th position overall and 2nd in the northern zone scoring above IIT Delhi, D.C.E., BITS Pilani etc. Previously the team got the support of Sona Steering sponsoring 2 lac and Logwell Forge Ltd. with 50 thousand.

Team THE TECHIE TYROS- **Faculty Advisor:** Prof K.K. Chaudhary, Mr. Ashwini Sharma

1. Ishan Jindal, 2. Prashant Goyal, 3. Raman Sarin, 4. Naveen Yadav, 5. Mohit Arora, 6. Natraj Mishra, 7. Anil Diwan, 8. Mahesh Yadav, 9. Nitin Gupta, 10. Lakshay Aggarwal, 11. Ravinder Singh, 12. Raghuvir Singh, 13. Prince Batra, 14. Anju, 15. Parmeet Singh, 16. Deepak Jain

Talking to the team about their experiences.........

"It was sort of rocking to interact with students in an out of classroom programme. Such events provide a boost to the students and indirectly to Indian automotive industry. S.A.E really put up a good show." *- Prof. K.K. Chaudhary, Faculty Advisor, The Techie Tyros*

"It was exciting to see such an event and being part of it. It has given a true practical experience not only to the students but to the faculty also. Now we can claim that we can design winning A.T.V. I congratulate the Techie Tyros team for such a splendid job." *- Mr Ashwini Sharma, Faculty Advisor, The Techie Tyros*

"Being a part of the event and interacting with all the other teams was a splendid experience. We enjoyed working together during the year. We are thankful to S.A.E., our sponsors and our teachers for believing in us and supporting us time and again". *- The Techie Tyros*

About the Vehicle: Single seater // Weight- 400 kg // Gasoline driven // 275 cc engine // 9 bhp at 3600 rpm // Max torque- 19 Nm at 2400 rpm // 4 forward, 1 reverse transmission // Top speed- 56 km/hr at no load // 8 inches ground clearance // Length 2.35 m and width 1.35m

GROWTH OF AUTOMOBILE SECTOR IN INDIA
ye dhaar hai…………..Pure **INDIAN**

If the travels of a country were to be chronicled by its cars, in the journey from Ambassador to the Nano is, perhaps, the story of India's evolution as a nation.

When Hindustan motors rolled out the first Ambassador car in 1957, its sturdy body, rounded contours and mother earth simplicity immediately backed its place in our collective consciousness.

Fifty years on, its changing form, plodding-yet-comfortable manner and home grown efficiency has imbued the Ambassador with a sepia-tinted nostalgia. The 'Amby' may have been modeled on the Morris Oxford but for most of us, it is quintessentially and uniquely Indian and marks a milestone in our growth as an industrialized country.

And yet, there is something about the fact that the once ubiquitous Ambassador car is today on the verge of extinction.

Today, as you watch the always-elegant Ratan Tata stride out of a car that should have logically been too small for his lumbering frame, you are standing face to face with the new India. The Nano - innovative, imaginative and affordable - best captures the spirit of 'jugad' street slang for the distinctly Indian ability to find a way around the system and in this case as ironies go, the origin of the word that has come to define the can-do attitude of an entire country lies in a makeshift vehicle popular in rural India.

The Nano represents an important inflection point in the global auto industry and in the evolution and maturation of the Indian industry. There is a great excitement because Tata Motors has introduced the global auto industry to a whole new consumer segment. This emerging consumer base around the world will be a major engine of global growth. However, this growth will not materialize without fundamental rethinking of the price- performance in the entire industry. I believe the Nano will spawn a new debate about manufacturing methods, use of materials, energy efficiency and transportation.

In India, it lays to rest skeptics who five years ago assumed India cannot compete in manufacturing. Yes, Indian engineers given the right challenges and leadership, can out-innovate and out-engineer others. Seldom does a single product introduction challenge the received wisdom in the industry so radically.

To me, Tata's Nano is a landmark event for a variety of reasons. Its innovation points to a whole new set of consumers, who did not have access to the car earlier. In a way, I liken it to a revolution that the PC and Apple iPod sparked.

I also like to think that it is going to fundamentally change the way the automobile sector functions. And here is why.

For the first time, thanks to Tata's Nano, India has been established as an R&D leader, and not just a low-cost hub known for cheap labour. It has shown to the world that India can be a technology leader.

When we talk of Tata's Nano, we are not just talking about low-cost, we are talking about high technology. If the car is enriched with high technology functions to make it an intelligent car, many in the world will look forward to own it. Tata's Nano shows that there is a huge opportunity for Indian companies to build profitable low-cost products and then take them globally.

Venues for automotive expositions around the world are cold, dark places for most of the year. But for a week or two every years, or alternate year, the world trains its eyes on them. Then they attain character, become launch pads for illustrious machines, platform to sign mega dollar deals, a source for zillions of pixels and places where lithium-ion batteries freak and die. The Detroit motor shows flexes its American muscles in the freezing cold of January, Frankfurt dehydrates visitors in its September heat every alternate year with its allegmanic might, Paris focuses on everything beautiful and automotive, Geneva goes all out for passion and neutrality, and Tokyo becomes the capital of techno-weirdness. Those carmakers who want to stand out choose the Los Angeles or New York motor shows to unveil their concepts and launch cars. Bologna and Shanghai are waking up to be exciting venues to remove satin from metal too.

It was perfectly acceptable for firms like General Motors, Ford and Hyundai to come to India and test the waters a decade ago. They did well in bringing the mighty Corvettes, Mustangs and pretty ladies, in that order, to impress show-goers. But people tend to walk past them and towards the Tata pavilion where there is something more tangible on wheels. Zillion dollar fuel-cell concepts vs. a Rs 1 lakh car? And, you all know who the winner is.

As Ratan Tata himself said later in the day, it was the image of a lower middle-class man on a scooter - the elder kid standing in front of the driver-father and the wife riding pillion with a baby on her lap - that kept playing on his mind. "Why can't this family own a car?" Tata's Rs. 1 lakh car project was the outcoming of that nagging image that kept tugging at his soul.

Yet skeptics had wondered disbelievingly, even laughed, at his daring and passion. Critics have raised issues of pollution and infrastructure overload, but surely these are not reason enough to shave off a technological breakthrough that will make owning a car into an affordable reality for millions. Visionaries must be allowed to give the world the benefit of their brave new vision as long as they do so with responsibility. All of these questions are subsequently answered as follows: the car follows Euro IV norms as far as pollution is concerned and it causes even less pollution than a two-wheeler; and the project resulted in 34 patent applications, including notably one for the light-aluminum 624cc engine. Tata says that 500 designers and engineers have spent the past four years developing the car. The fact that they did so apparently without sacrificing safety standards or even exploiting currently low Indian emissions rules suggests that it is the result of genuinely innovative design and process-engineering.

As nowadays, the market is not only manufacturing, rather it is competitive manufacturing; this emergence of technology has probably sparked the other automobile majors to move onto the similar tracks. Lets take Maruti for instance. It has planned 5000 crores for Research and development, and 9000 crores for expansion purposes like in Manesar plant. SX4 and Swift are the outcomes of the same. Now A Star is also getting ready to rock the automobile market.

In the past, we as a country may have concentrated on local rather than global challenges, we might have lacked positioning and confidence, and we were known more for our diligent man-power than our creative brain-power. But of late and led by Young-India - we've demonstrated that a pursuit of a vision combined with thinking out of the box, can result in innovative and cutting edge solutions even in the face of all odds.

Specifically Mr. Tata's deliverance on a promise should be an inspirational example to youth India in Universities all over the world, as well as corporate India who'd do well to learn that just because the developed world says its impossible doesn't make it so.

- Paryank Malik, Final Year Mechanical

COMPUTER SOCIETY OF INDIA (CSI)

The "**Computer Society of India**" is a professional body where computer professionals meet to exchange views and information, to learn and share ideas. The CSI is the oldest and largest organization of IT professionals in India having 25,000 members and 63 chapters and more than 200 Students Branches across the country exclusively focusing on the interest of the IT Professionals. Institute of Technology & Management, Gurgaon is a collegiate chapter of CSI with 151 members from every engineering discipline and is headed by the H.O.D. Prof. Ranjit Biswas and Mrs. Deepti Gaur with the contribution of the drafting team.

Objective of CSI

The purposes of this society are scientific and educational directed towards the advancement of the theory and practice of computer science, computer engineering and technology, systems science and engineering, information processing and related arts and sciences. It shall endeavor to:

• Promote interchange of information, in these disciplines and sub discipline.
• Promote Research & Development at ITM through seminars, symposia and guest lectures.
• Create a sense of partnership amongst the professionals engaged in these fields.
• Organize many core computer events and activities such as educational trip, group discussions, technical quizzes, innovative projects etc.. throughout the year.

What lies behind us and what lies before us are tiny matters compared to what lies within us — *Ralph Waldo Emerson*

INDIAN SOCIETY FOR TECHNICAL EDUCATION (I.S.T.E.) STUDENTS AND FACULTY CHAPTER-ITM, GURGAON

I.S.T.E. is a national level professional body to provide membership to students as well as faculty. Students Chapter of I.S.T.E. takes care of academic and professional need of student members. The students of Electronics / Computer Science / Information Technology degree are eligible to get yearly membership. The I.S.T.E. plays an important role to improve the standard of education, counseling of students for better employment opportunities and encouraging outside class room studies / practical works / seminars etc. The main objective of I.S.T.E. are to plan and arrange the technical programs and activities on regular basis to provide a common platform to exchange ideas and information on topics of their interest of higher education opportunities, an new developments, to arrange technical visits, practical trainings, to encourage team work and sprit of self-reliance among the students and faculty and to serve as focal point on all aspect of professional development.

Honorable Chairman:
Sh. Avdhesh Mishra
Honorable Secretary,
Governing Body, ITM
Working Coordinator:
J.P. Shivhare
ECE & EI Dept., ITM
(from August-07)

SOCIETY OF ELECTRONICS ENGINEERS (S.E.E.) DEPTT. OF ECE & EI, ITM, GURGAON

S.E.E. is a departmental professional society of ECE & EI Department, ITM. All students of this department are members of this society. The main objective of this society is to develop abilities among students in the technical as well as non-technical fields. The society has an executive committee comprising President (Prashant), Vice-President (Naveen Bansal), Secretary (Nitesh), Joint Secretary (Nidhi) and 10-12 active members, for one year tenure. The Society arranges many events and activities such as Educational Tours, Technical Presentations, Seminars, Lecture Series, Group Discussion, Technical and Non-technical Quizzes, Debates, Essay Writing, Brain Teasers, Technical Film Shows etc. throughout the year.

Founder Head:
Prof. V.N. Sharma
Senior Professor, ITM
Working Chairman:
J.P. Shivhare
ECE & EI Dept., ITM

ARISE, AWAKE AND STOP NOT TILL THE GOAL IS REACHED

This is the basic message that was conveyed by Swami Vivekananda. Though it is a simple sentence, this conveys a lot of meaning. The following is my personal interpretation of the same after reading more of spiritual speeches and attending lectures.
ARISE: Do not sit idle. Get up. Get into action. Don't waste your life in sitting idle and doing things that waste years and takes one away from GOAL. Give up laziness and be filled with an energy to get into action. Always be filled with a positive energy that lets you stay focused and be in action.
AWAKE: Awakening does not mean just getting up from sleep. Here Awakening means the mental realization about one's state. Awakening comes when one realizes that one is sleeping. Realize one's current state and realize where one needs to go is the mental awakening that is needed for an individual.
GOAL: Having goal is the first step towards realizing the same. One of the most difficult things in life is become aware of one's goals. Goal is not petty desires that one attempts to achieve. A higher goal that sets an individual very determined to achieve, which focuses energy of an individual. The goal should be very clear in one's mind. Reaching the goal should be the only purpose for which the individual lives the life. Mere thought about the goal motivates the individual to do anything. Character of the individual is developed and motivated by the GOAL.
STOP NOT TILL THE GOAL IS REACHED: Once the GOAL is clear in mind, work with unwavering concentration and determination towards achieving the goal. Do not flinch from path that leads to the ultimate GOAL. Have only one aim day in and day out to reach the goal.
In summary, the sentence upon reflection gives a very strong message to every individual to become aware one's true nature of achieving their ultimate goal of life.
Many times during the day, I am reminded of this single sentence which fills me with an energy to stay positive and keep working without getting de-motivated. Working towards one's goals with dedication is what makes the life fulfilling.
The above is my personal interpretation that I thought would share with everyone. This sentence taken from one of the eight Upanishads and used a motto is worth reflection whenever one find's time. I have been thinking for quite some time to share my views with everyone and I realized one such goal today

- Naveen Bansal, 05EL246

LIFE AT ITM

A whole year has literally whooshed passed me as I entered the institute as a fresher. The whole experience of being in an institute of higher learning just terrified me as it would any other fresher in my position. And I'm sure the fear of the unknown will keep all fresher's, coming after me, tossing and turning in their beds. The prospect of just walking into a room full of strangers and sitting with these unknown people who would be talking about how good this institute was, was daunting. I mean, how many first days in our life have we ever faced (army kids not withstanding, because they have to move all the time)? But the orientation was better than I had ever expected. I was made to feel welcome as soon as I entered. I felt that a long lasting relationship with ITM had been forged as soon as I stepped into the seminar hall.
The first day was just the same. The faculties made us feel welcome and teaching was pretty low key as everyone just wanted to get acquainted with the new students. But we got down to business the very next day. We experienced what was going to be the schedule for us for probably the next four years (if I am lucky enough not to be detained because of my short attendance otherwise I'd have to stay here for another year.J). Jokes apart, this place is really great to be studying in. By now I'm sure everyone knows that ITM is the only self financed institute in northern India to be featured in the top 50 institutes of OUTLOOK (It's been on the college website for sometime now, check it out on www.itmindia.edu).
The classrooms are spacious and the departments provide an unsurpassable infrastructure. The faculties are some of the best in India. The labs contain state of the art equipment which makes working there a breeze. The lab assistants are helpful and guide you through all the experiments very carefully and make sure that we have a complete understanding of the experiment before moving on.
To fully appreciate ITM, I must also appreciate its various societies and publications which provided me with a platform over the past year to express myself and make myself heard. SAE, SEE, ISTE, Crossroads, etc. make sure that we participate somewhere or the other. Momentum, SPIC MACAY not to mention national level nano-technology conferences for the benefit of students like me and my peers are various. Vector-tech, the college newsletter keeps everyone tuned in to what's going on. The college has a great track record of placements considering the fact that it's only 11 years young. The canteen is amazing and stocked with mouth watering food all the time.
Just to be studying here and being part of this esteemed institution is a pleasure not to mention a great honor. I have made friends, had experiences, which I never had in my school, and I hope everyone has the same here.
This institute ITM has not only provided a place for me to learn but also to make friendships that will probably stand the test of time.

- Dhwani Chutani, Student (ME)

REPORT CEREBRATION 2007

Institute of Technology and Management celebrated its annual technical celebration, **CEREBRATION 07** on 30th and 31st March 2007, this was the most successful event in the history of technical celebration at our renowned institute.
We invited 50 colleges in total from NCR and other regions, from which the participation was off round about 220 students, leading it to a major success in NCR, the major institutes which participated were • IIT Delhi • Delhi College of Engineering • NSIT • YMCA • CITM • Apeejay • KIIT • Dronacharya College of Engineering, and four others.
From our own institute there was a mass participation of about 1200 students, who excelled in many events, including which there major attractions were • Auto Cad • All Terrain Vehichles • Regatta • Motor Boat Racing • Dalal Street • Group Discussion • Technical Paper Presentation • Nirmaan • Model The World • Lan Gaming • Sudoku • Microwars • Online Treasure Hunt • Byte Fight And On The Spot Programming • E-Grab • Extempore • Web Designing • GK Quiz • Filmotsava • Amazing Race • HDL Programming • IMS Cat Challenge
And as a result of the massive participation our college students we bagged maximum prizes and also IMS appreciated our participation as well as our performance in the mock exam. The three major prizes awarded by IMS were also bagged by the students of ITM.
There was a massive participation in LAN GAMING. Colleges like IIT, DCE and NSIT participated in this event.

CENTRE OF ACADEMIC EXCELLENCE & PLANNING (CAEP)

Introduction
The Centre of Excellence & Planning (CAEP) is responsible for offering professional development services to all faculty and staff at the institute. The centre works closely with all faculties to ensure that faculty members are given the greatest possible range of tools and facilities to provide a rich learning experience for students. Academic values include commitment to excellence in particular fields of study, as expressed in teaching, research, and in support of departments and programs.
The Centre aims to cultivate knowledge and critical thinking through dialogue and collaboration. CAEP is dedicated to create an environment for learning and discovery, which fosters personal growth and promotes each person's uniqueness and independence.

CAEP Committee Members
• Dr. Jyoti Sinha, Assoc. Prof. Applied Sciences & Coordinator CAEP
• Dr. M.N. Deshmukh (Assoc. Prof. Mechanical Engg. Dept.)
• Dr. Manoj Pandey (Assoc. Prof., ECE & EI Dept.)
• Ms. Savita Sondhi (Lecturer, ECE& IT Dept.)
• Ms. Jolly Shah (Lecturer, Mech. Engg. Dept.)
• Ms. Gunjan Pahuja (Sr. Lecturer, CSE & IT Dept.)
• Ms. Suman (Lecturer, CSE & IT Dept.)
• Ms. Roopal (Lecturer,CSE & IT Dept.)

Activities Under CAEP
Industry - Institute Interaction
Renewable Energy Club
Renewable Energy Club sponsored by Haryana Renewable Energy Development Agency, Dept. of Renewable Energy, Haryana

Objectives of club
1. Projects from students 2. Competition for student 3. Poster competition for students 4. Seminar and Debate 5. Quiz competition for students 6. Essay competition for students.
We have received a Solar Educational Kit as an appreciation for renewable energy club by the Haryana Government.

Faculty Development Workshops
Guest Lectures
Industry personnel represent a wonderful resource for education. Inviting an industry representative to ITM for a guest lecture or seminar provides students with knowledge about a topic and an idea of career options outside the academic environment. **Collaborative Projects**
Collaborative Projects partnerships are a privileged means to promote innovation and the introduction of new technologies within companies. Researchers and industrialists pool their expertise to complement each other and reach new levels of synergy. This type of project is conducted in collaboration with an individual company and involves industrial R&D work whose purpose is to provide the specific solution to a given problem.

The mighty oak was once just a small nut that stood his ground— Rianna Nadon

SMART POLYMERS

Polymers possess many superior properties , such as bio-compatibility, bio-sustainability at different temperatures and other physical and chemical conditions in the body of human-beings. Polymers are man made materials as well as natural one. They are polymerized by the repeated addition of large number of monomers.

Engineers are developing such types of polymers which display unconventional characteristics, enable to satisfy the severe requirements for implantation in the human body. Such polymers are capable to change shape on heating, to open blocked arteries, probe neurons in the brain and engineer the complicated spine.

The mechanical, chemical, thermal and other properties of these polymers, make them attractive for unbelievable bio-medical applications and are called shape-memory or smart-polymers. They can be temporarily compressed or stretched into required form, several times bigger than their original shape.

Prof Ken Gall, of the George W. Woodruff School of Mechanical Engineering and his team of researchers have recently, designed a shape-memory polymer stint that can be compressed and fed through a tiny hole in the body into a blocked artery, just like a conventional stent. Then the body temperature triggers the polymer's expansion into its permanent shape, resulting in natural deployment without auxiliary devices. Shape memory materials are composed of two components with different thermal characteristics, oligo (e-caprolacyone) diol and crystallisable oligo (p-dioxanone) diol.

These applications of smart polymers show significant progress in the medical treatment of human being. The introduction of such devices would benefit patients and allow dramatic decrease in the overall cost of the treatment.

Dr. Ravi Bhushan Bajpai
Deptt. of Applied Sciences
and Humanities, ITM, Gurgaon

RENEWABLE ENERGY CLUB

The renewable energy club has been a source of inspiration and a leader in its field. It may not be making a huge difference but it is certainly making a dent. It is educating students on the use of renewable sources of energy and their cost effectiveness. It also focuses on sustainable development and how it depends on research and development, cost effective and cost recoverable technologies and how these new technologies and new energy systems interact with existing economic frameworks. Our institution is not only helping the cause of renewable energy but also taking it forward by organizing a number of competitions and lectures from eminent personalities in this field. Its chief patrons include Mr. V. Daulet-Singh, Mr. Avdhesh Mishra and Mr. Shiv S. Mehra. The patrons include Prof. Rakesh Ranjan, Principal - ITM, Prof. Swaran Ahuja Dean-ITM, Prof. K.K. Chaudhry (HOD, ME). The co-ordinators of the society are: Dr. Jyoti Sinha (Assoc. Prof. Applied Sciences), Ms. Jolly Shah (Sr. Lecturer, ME). The general faculty members of the society are Mr. Manoj Kumar (Asst. Prof. ME), Dr. Rashmi Tyagi (Asst. Prof. Applied Sciences), Dr. Veer Singh (Asst. Prof. Applied Sciences), Ms. Shrutimita Mehta (Sr. Lecturer, Humanities), Dr. Reena (Sr. Lecturer, Applied Sciences) and student co-ordinator is Kashish Jhamb.

Our Aim:
- To promote the implementation of renewable energy innovations.
- To promote research into the development and operation of renewable energy applications. Use of Wind Energy, Biomass energy, Solar energy, Energy from waste.
- To facilitate sustainable development through the use of renewable energy.
- To discuss environmental issues related to energy conversion and energy efficiency.
- To assist private industries in producing, marketing and utilizing renewable energy.

The main activities of the club in ITM and the respective award winners are as follows:

Name of the activity	Competition date	Winners		
Guest Lectures	5-02-2007 15-02-2007		Delivered by Prof.H.P.Garg (IIT, Delhi) Delivered by Prof.Viresh Dutta (IIT,Delhi)	
Quiz Competition	19-03-2007	1st	Prateek Gupta (06CS168) Jasbir Shokeen (06AU611)	
		2nd	Tanmoy Bose (06EL 306) Pranay Sethi (04IT 540)	
		3rd	Vivek Kumar (06EL316)	
Debate Competition	16-03-2007	1st	Eva Gupta (06EL240)	
		2nd	Nidhi Dwevedi (06EL270)	
		3rd	Pryank Malik (04ME339)	
Essay Competition	09-02-2007	1st	Saurabh Kalra (06EL297)	
		2nd	Dhawal (05ME317)	
		3rd	Kaushal Pandey (06AU614)	
Theoretical Project	28-03-2007	1st	Rakesh Kumar (04ME344)	
		2nd	Abhijit Kumar (05EL201) Raman Sarin (05ME340)	
		3rd	Ayush Saxena (05ME315) Jatinder Seth (05ME322)	
Live Technical Project	28-03-2007	1st	Pryank Malik (04ME339) Dinesh Kochar (04ME317)	
		2nd	Deepak Kumar (06AU606)	
		3rd	Natraj Mishra (04ME330) Rakesh Kumar (04ME344)	
Technical Paper Presentation	29-03-2007	1st	Abhijit Kumar (05EL201) Raman Sarin (05ME340)	
		2nd	Pryank Malik (04ME339) Dinesh Kochar (04ME317)	
		3rd	Nitin Gupta (04ME322)	
Poster Making Competition	30-03-2007	1st	Rakesh Kumar (04ME344)	
		2nd	Deepak Kumar (06AU606)	
		3rd	Ujjwal Gupta (06AU626)	

ELECTRONICS - CLUB
Exploration of limitless imagination

At **Institute of Technology and Management**, Gurgaon, the Department of Electronic and Communication & Electronics and Instrumentation Engineering has formalized a hobby club - **The Electronic Club** for the students with the primary objective to gain practical experience in designing and analyzing electronic circuits. It provides a platform to make them well-versed with the latest technological trends and practically implementing their theoretical concepts. The club will also organize a wide variety of events for the benefit of the students. **Ms. Anita Sharma, Ms. Prabhjyot Kaur** and **Ms. Anita Jain** are the faculty coordinators of the Club. They exhorted the students to keep their interest buoyed up and actively participate in all the activities of the Club. Through this Club the coordinators are fully involved in nurturing the spirit of learning and enhance technical skills in the students. The **Student President** of the Club is **Mr. Naveen Bansal** (ECE 3rd Year)

Objectives:
- To promote creative and innovative thinking.
- To gain practical experience in designing and analyzing electronic circuits.

REVERSING THE BRAIN DRAIN

Hundreds of thousands of our qualified youngsters take off from different international airports every year for higher studies or highly lucrative jobs in the US, the UK, Germany, France and Australia. And most of these Indians prefer to settle down, attracted by the facilities and the higher quality of life provided by these countries. We have been crying hoarse about the brain drain from India over the last five decades or more, without going in for a well-set blueprint to check the counter-productive phenomenon. Some of public schools in our metros and our IITs and IIMs are providing world-class education. One might wonder that having a lot on infrastructure, training and other facilities and the best teaching staff, can the government and the people of India look away as the talent, assiduously nurtured in India, is utilized by other countries for their development and excellence in other fields?

During the decades-long debate on the brain drain it was said that our youngsters leave India because excellence is neither recognized nor rewarded in India. This could have been partly true at the beginning of this debate. But today, things have changed beyond recognition and talented people can reach the highest position possible if only they are to work hard.

Youngsters from India-whatever be the field they are working in-are today suitably recognized and rewarded Take the field of sports where many of the celebrities are household names-Sania Mirza, Narain Karhikeyen, Sachin Tendulkar, Anju Bobby George, P.T. Usha and several others. Innovation and managerial skill get recognition when Indians can vie with others in excellence from any part of the world. Take the story of a Ambani brothers, the Tatas, the Mittals and others who are having their footprints in different continents.

And happily enough, this is already happening now. A report released by a high-tech lobbying group in the silicon valley in 2005 revealed that the highly-skilled born talent that once flocked to the US was returning home, "Turning America's brain drain into India's brain grain". Titled "losing the competitive edge: The challenge for science and technology in the US", the report said that countries like India and China, thorough the restructuring of their economies, were dramatically increasing the skill sets of their work force, thereby posing a challenge to the US leadership in the technology domain. "Public-private have invested in technical universities and communications, infrastructure to create cutting edge technology parks in places like Bangalore and Karnataka. This will make India more competitive and alluring to investors and multinational companies".

According to The Times, Higher Rankings, developed by the Times Higher Education Supplement in London, IITs in India are ranked third in the world. Like our IITs, our IIMs too, have earned a pride of place in our specialized learning system. With the state of the art specialty hospitals emerging in different parts of India, patients from abroad find that complicated surgeries could be had in India at a relatively lower cost. If doctors and specialists find the going good in their own country, why go abroad? When India can stand good in comparison with other developed countries in a variety of fields, the youth of India would find that working in their own country is more rewarding than working elsewhere in the world. And even if they go abroad to better their specialization, they would still prefer to return home and pursue a life of their own choice, without sundering the traditional family ties and with the nourishing of Indian values. After all, a home is a home and not all the wealth in the world can buy the happiness that your home and country can give.

- Ankur Sikri, 2nd Year, ECE

CONVOCATION

SPORTS NEWS

ITMites are wont to prove themselves time and again in sports as in academics. During the sports week the Institute was adorned with multicoloured flags . Both boys and girls participated in various games and sports . Races, Cricket, Volley ball, Tug of war and several other sports activities filled in the playground with charm and cheerfulness.

This year was studded by commendable feats by them. In the Annual Meet of ITM held during 5th and 6th October 2007.

Athletics: Boys:

100m	-	Lokesh
200m	-	Ravinder
400m	-	Ajay
800m	-	Saurabh
1500m	-	Deepak
3000m	-	Ajay
4*100m Relay	-	Lokesh, Viahal, Ankit, Narveer
Long jump	-	Ajay
High jump	-	Mandeep
Triple jump	-	Ajay
Jevellin Throw	-	Satender
Shot put	-	Satender
Discuss Throw	-	Neeraj
Arm Wrestling	-	Anshuman
Best Athelete	-	Ajay

Girls:

100m	-	Megha
200m	-	Shweta
Long Jump	-	Renu Bhardwaj
Jevelin Throw	-	Divya Yadav
Shot Put	-	Renu Bhardwaj
Disuss Throw	-	Renu Bhardwaj
Arm Wrestling	-	Shweta
Best Athelete	-	Renu Bhardwaj

Team Sports:

Cricket	Boys	W-CSE	R-ECE
	Girls	W-IT	R-MBA
Volley-Ball	Boys	W-CSE	R-ECE
	Girls	W-ECE	R-CSE
Carom	Boys	W-IT	R-ECE
	Girls	W-CSE	R-ECE
T.T.	Boys	W-CSE	R-ECE
	Girls	W-ECE	R-ME/MBA
Chess	Boys	W-IT	R-ECE
	Girls	W-IT	R-CSE
Tug of War	Boys	W-CSE	R-CVL
	Girls	W-CSE	R-IT
Str's Mania	Boys	W-IT	R-EL
	Girls	W-ECE	R-IT
Foot Ball	Boys	W-ME	R-LSE
	Girls	W-IT	R-ECE

Inter College Tournaments (I.T.M. - A)
• Shekher
• Piyush
• Aman
• Rahul Tanvar

T.T. Boys Runner-Up (I.T.M - B)
• Manuraj
• Lokesh
• Manyank
• Manish

T.T. Girls Runner-UP
• Sumedha
• Sonam
• Nitya
• Palak

ORGANIC LIGHT EMITTING DOIDE (OLED)

An *organic light-emitting diode* (**OLED**), also *Light Emitting Polymer* (**LEP**) and *Organic Electro-Luminescence* (**OEL**), is any light-emitting diode (LED) whose emissive electroluminescent layer is composed of a film of organic compounds. The layer usually contains a polymer substance that allows suitable organic compounds to be deposited. They are deposited in rows and columns onto a flat carrier by a simple "printing" process. The resulting matrix of pixels can emit light of different colors.

OLED Components

Like an LED, an OLED isa solid-state semiconductor device that is 100 to 500 nanometers thick or about 200 times smaller than a human hair. OLEDs can have either two layers or three layers of organic material; in the latter design, the third layer helps transport electrons from the cathode to the emissive layer. In this article, we'll be focusing on the two-layer design.

An OLED consists of the following parts:

• **Substrate (clear plastic, glass, foil)-** The substrate supports the OLED.
• **Anode (transparent)-** The anode removes electrons (adds electron "holes") when a current flows through the device.
• **Organic layers-** These layers are made of organic molecules or polymers.
• **Conducting layer-** This layer is made of organic plastic molecules that transport "holes" from the anode. One conducting polymer used in OLEDs is polyaniline.
• **Emissive layer-** This layer is made of organic plastic molecules (different ones from the conducting layer) that transport electrons from the cathode; this is where light is made. One polymer used in the emissive layer is polyfluorene.
• **Cathode (may or may not be transparent depending on the type of OLED)-** The cathode injects electrons when a current flows through the device.

How do OLEDs Emit Light?

OLEDs emit light in a similar manner to LEDs, through a process called **electrophosphorescence**.

The process is as follows:

1. The battery or power supply of the device containing the OLED applies a voltage across the OLED.
2. An electrical current flows from the cathode to the anode through the organic layers (an electrical current is a flow of electrons).
(a)The cathode gives electrons to the emissive layer of organic molecules.
(b)The anode removes electrons from the conductive layer of organic molecules. (This is the equivalent to giving electron holes to the conductive layer.)
3 At the boundary between the emissive and the conductive layers, electrons find electron holes.
1. When an electron finds an electron hole, the electron fills the hole (it falls into an energy level of the atom that's missing an electron).
2. When this happens, the electron gives up energy in the form of a photon of light (see How Light Works).
4. The OLED emits light.
5. The color of the light depends on the type of organic molecule in the emissive layer. Manufacturers place several types of organic films on the same OLED to make color displays.
6. The intensity or brightness of the light depends on the amount of electrical current applied: the more current, the brighter the light.

Types of OLEDs: Passive and Active Matrix

There are several types of OLEDs: • Passive-matrix OLED • Active-matrix OLED • Transparent OLED • Top-emitting OLED • Foldable OLED • White OLED

Each type has different uses. In the following sections, we'll discuss each type of OLED. Let's start with passive-matrix and active-matrix OLEDs.

Passive-matrix OLED (PMOLED)

PMOLEDs have strips of cathode, organic layers and strips of anode. The anode strips are arranged perpendicular to the cathode strips. The intersections of the cathode and anode make up the **pixels** where light is emitted. External circuitry applies current to selected strips of anode and cathode, determining which pixels get turned on and which pixels remain off. Again, the brightness of each pixel is proportional to the amount of applied current.

PMOLEDs are easy to make, but they consume more power than other types of OLED, mainly due to the power needed for the external circuitry. PMOLEDs are most efficient for text and icons **Active-matrix OLED (AMOLED)**

AMOLEDs have full layers of cathode, organic molecules and anode, but the anode layer overlays a thin film transistor (TFT) array that forms a matrix. The TFT array itself is the circuitry that determines which pixels get turned on to form an image.

AMOLEDs consume less power than PMOLEDs because the TFT array requires less power than external circuitry, so they are efficient for large displays. AMOLEDs also have faster refresh rates suitable for video. The best uses for AMOLEDs are computer monitors, large-screen TVs and electronic signs or billboards.

Types of OLEDs: Transparent, Top-emitting, Foldable and White

Transparent OLED

Transparent OLEDs have only transparent components (substrate, cathode and anode) and, when turned off, are up to 85 percent as transparent as their substrate. When a transparent OLED display is turned on, it allows light to pass in both directions. A transparent OLED display can be either active-or passive-matrix. This technology can be used for heads-up displays.

Top-emitting OLED

Top-emitting OLEDs have a substrate that is either opaque or reflective. They are best suited to active-matrix design. Manufacturers may use top-emitting OLED displays in smart cards.

Foldable OLED

Foldable OLEDs have substrates made of very flexible metallic foils or plastics. Foldable OLEDs are very lightweight and durable. Their use in devices such as cell phones and PDAs can reduce breakage, a major cause for return or repair. Potentially, foldable OLED displays can be attached to fabrics to create "smart" clothing, such as outdoor survival clothing with an integrated computer chip, cell phone, GPS receiver and OLED display sewn into it.

White OLED

White OLEDs emit white light that is brighter, more uniform and more energy efficient than that emitted by fluorescent lights. White OLEDs also have the true-color qualities of incandescent lighting. Because OLEDs can be made in large sheets, they can replace fluorescent lights that are currently used in homes and buildings. Their use could potentially reduce energy costs for lighting.

In the next section, we'll discuss the pros and cons of OLED technology and how it compares to regular LED and LCD technology.

OLED Advantages and Disadvantages

• The plastic, organic layers of an OLED are thinner, lighter and more flexible than the crystalline layers in an LED or LCD.
• Because the light-emitting layers of an OLED are lighter, the substrate of an OLED can be flexible instead of rigid. OLED substrates can be plastic rather than the glass used for LEDs and LCDs.
• OLEDs are brighter than LEDs. Because the organic layers of an OLED are much thinner than the corresponding inorganic crystal layers of an LED, the conductive and emissive layers of an OLED can be multi-layered. Also, LEDs and LCDs require glass for support, and glass absorbs some light. OLEDs do not require glass.
• OLEDs do not require backlighting like LCDs. LCDs work by selectively blocking areas of the backlight to make the images that you see, while OLEDs generate light themselves. Because OLEDs do not require backlighting, they consume much less power than LCDs. This is especially important for battery-operated devices such as cell phones.
• OLEDs are easier to produce and can be made to larger sizes. Because OLEDs are essentially plastics, they can be made into large, thin sheets. It is much more difficult to grow and lay down so many liquid crystals.
• OLEDs have large fields of view, about 170 degrees. Because LCDs work by blocking light, they have an inherent viewing obstacle from certain angles. OLEDs produce their own light, so they have a much wider viewing range digital cameras.

IS ETHANOL THE ALTERNATIVE FUEL?

Ethanol (commonly called "Alcohol") has assumed a very important place in the world's economy. It is a vital raw material for a number of chemicals. It has been a major source of revenue by way of excise duty for the Governments.

Industrial alcohol produced from sugarcane molasses has a significant role to play in the world's economy. Alcohol is a by-product of sugar industry which is linked to agriculture. Sugarcane crop is a renewable source of energy. Therefore alcohol produced from molasses deserves a preferential place as a substitute feed stock for chemicals industry to bridge the gap in any country's energy needs for increasing requirement for potable purpose. Sugarcane can also be directly used to produce ethanol.

Alcohol Based Chemicals

Ethyl Alcohol is an important feed stock for the manufacture of chemicals. These chemicals are Acetic Acid, Acetone, Butanol, Butadiene, Acetic Anhydride, Vinyl acetate, styrene, MEG PVC etc. Synthetic rubber industry also requires large quantity Of Alcohol. The main product INDUSTRIAL ALCOHOL is used in the manufacturing of the following Alcohol based chemicals, the uses of which are also given below:

a) Acetaldehyde: Can be used for industrial use as Chemicals derivatives Pharmaceutical applications and synthetic resins and for manufacture of Acetic Acid.

b) Acetic Acid: Used in Pharmaceuticals applications, Textiles, Dyestuffs, Ethyl Acetate, and is the basic chemical for Alcohol based chemicals via Acetaldehyde route.

c) Acetic Anhydride: Used in Bulk Drug manufacturing

d) Ethyl Acetate: Used in manufacturing of Paints, Dyestuffs and Pharmaceuticals.

e) Substitute to: Used in manufacture of HDPE, LDPE etc. and Chemicals other Petroleum based petroleum based chemicals such as Ethylene Glycol.

Alcohol as Fuel/Ethanol Blended Petrol

The trend in the world (particularly Brazil and USA) is towards the use of alcohol as an alternative fuel. During World war II, alcohol in the form of power alcohol was used for blending with petrol in the proportion of 80% petrol and 20% power alcohol. Brazil has developed a technology which has made possible large scale substitution of petroleum derived fuel. Now Anhydrous Alcohol is exclusive fuel for automobiles. Alcohol powered vehicles have taken the first position in Brazil & accounting for 80% of overall sales of about 500,000 alcohol powered vehicles every year.

Anhydrous Alcohol (99.5% v/v) is being used as fuel, by mixing it with Petrol. The blend of Anhydrous Alcohol and petrol is called Gasohol. In Brazil 4 million Vehicles are running on Gasohol. The content of alcohol in Gasohol varies from 10% to 85%. Alcohol works as Oxygenate in petrol combustion and superior to other oxygenate MTBE and ETBE. Alcohol reduces CO (Carbon Monoxide) emission and cause less pollution compared to petrol.

It can be seen that demand for alcohol will be ever increasing & there would not be any problem in marketing alcohol (either for Industrial or for potable purpose) produced by distilleries.

It is debatable whether corn should be used for producing ethanol or for that matter any food grain.

- Ms. Smita Rajpal and Ms. Suman Allahawadi

I don't believe in stars. Except the ones you can look up and see – Loretta Lynn

LABORATORIES

"Wisdom begins in wonder." - Socrates

ITM has huge workshops, well equipped software laboratories and electronics labs, UG and PG research laboratory setup with well equipped advanced machines and equipments that provide the facilities for conducting the experiments and training the students as per the market requirement. Besides academic, ITM also has highly advanced computational research lab with sophisticated design and computational softwares. The laboratories also provide infrastructural support (hardware and software) for carrying out research and development work in various areas of their respective engineering. ITM has some of the most advanced labs in the country. All the labs are wi-fi enabled.

The labs provide a simulating environment for the students to learn. As the quote above states that wisdom begins in wonder, the labs provide a place to ponder and find answers to scientific queries by students on their own.

UBIQUITOUS COMPUTING

Ubiquitous computing (Pervasive Computing), following the vision of Mark Weiser aims to embed small computer devices into every day objects to augment them with new functionality and to build an environment full of distributed computers. Taking the ideas of Mark Wieser (1991) as a starting point there is a growing number of research projects that explore ubiquitous or pervasive computing. Ubiquitous computing environments promise to transparently support people in their daily activities by leveraging computing resources existent in the physical environment devices. The increased availability, miniaturization, performance, enhanced data rates, and the expected convergence of future wireless communication and network technologies around mobile health systems will accelerate the deployment of ubiquitous heath care systems and services within the next decade.

Pervasive computing is the next generation computing environment with information and communication technology everywhere, for everyone, at all times. The technologies of wireless, sensor networks play important roles in pervasive computing. Sensing devices connected through wireless communication can capture, process and disseminate useful information surrounding us. Ubiquitous computing names the third wave in computing, just now beginning. Ubiquitous computing is a seamless technology that will permeate into life style of humankind to provide valuable service based on user preference. Ubiquitous computing has as its goal the enhancing computer use by making many computers available throughout the physical environment, but making them effectively invisible to the user. Ubiquitous computing is not virtual reality, it is not a Personal Digital Assistant (PDA) such as Apple's Newton, and it is not a personal or intimate computer with agents doing your bidding. Unlike virtual reality, ubiquitous computing endeavors to integrate information displays into the everyday physical world. It considers the nuances of the real world to be wonderful, and aims only to augment them. Unlike PDA's, ubiquitous computing envisions a world of fully connected devices, with cheap wireless networks everywhere; unlike PDA's, it postulates that you need not carry anything with you, since information will be accessible everywhere. Unlike the intimate agent computer that responds to one's voice and is a personal friend and assistant, ubiquitous computing envisions computation primarily in the background where it may not even be noticed. Whereas the intimate computer does your bidding, the ubiquitous computer leaves you feeling as though you did it yourself. Activate the world. Provide hundreds of wireless computing devices per person per office, of all scales (from 1" displays to wall sized) .It is invisible; everywhere computing that does not live on a personal device of any sort, but is in the woodwork everywhere. Single most important paradigm of ubiquitous computing is that it is a converged paradigm of agrarian, industrial and also information technology paradigms. Ubiquitous means prevalence of information and computers, congruent to existence that of air, water, wind and etc. The ubiquitous computing environments of the near future will involve the interactions, coordination and cooperation of numerous, casually accessible, and often invisible computing devices. These devices, whether carried on our person or embedded in our homes, businesses and classrooms, will connect via wireless and wired links to one another and to the global networking infrastructure. In ubiquitous computing, a person might interact with hundreds of computers at a time, each invisibly embedded in the environment and wirelessly communicating with each other.

- Sachin Bhardwaj, Dept. of CSE & IT, ITM, Gurgaon

MBA SEMINAR HALL

As one enters the peach coloured, high-tech MBA seminar hall, he feels transported from the halls of ITM, Gurgaon to a top grade B-school. The seminar hall has the look and feel of an international B-school at par with any avante grade of their category. The soft shades and about twenty computer screens provide a respite from white boards and endless lectures in class rooms. It combines the old world feel of comfort with the most sophisticated gadgetry with an elegance that's really astounding. The temperature control system put in place is really mind blowing and the thought of the summer heat or the winter cold is banished as soon as one steps into this wonderful seminar hall.

Here the MBA students are given a feel of what business is in the 'real' world. The students are given management tips and taught techniques which will further their knowledge of how the business world works.

This seminar hall with all its facilities will definitely give an edge to the MBA students as it provides not only a place where students can hone their computer skills. The computers have the latest technology and a P4 backing which makes them some of the best pieces of equipment to work with. The entire hall is Wi-Fi connected (and fro the technologically ignorant Wi-Fi means wireless internet), so it makes information available in a matter of minutes, if not seconds.

Management mantras are talked about in detail as everything is dealt with at almost lightening speed. In this changing scenario we can't afford to stop and smell the roses. This seminar hall not only provides a place to learn but also a place to learn to be fast. The environment is very cut throat but also that of a place of learning. All in all it is a place where students can participate, learn and become pioneers in their professional lives.

SPIC MACAY 2007

ITM, Gurgaon is a part of the famous international organization organization **SPIC MACAY** (Society for Promotion of Indian Music and Cultural Amongst Youth). The institute organizes musical concerts twice a year under the aegis of SPIC MACAY wherein students witness programmes by renowned exponents of Indian Music, Vocal and Instrumental and Dance. Some of the artists who have honored us by their visit are: Pt. Neeladri Kumar, Pt. Viswa Mohan Bhatt, Pt. Salil Bhatt, Shri T.N. Krishnan, Shrimati Savita Devi, Pt. Ronu Mazumdar, Pt. Rajan Mishra, Pt. Sajan Mishra etc.

Rajan Mishra and **Sajan Mishra** are two of the most legendry singers of India. Born in the famous Banaras Gharana, Pt. Rajan Mishra and Pt. Sajan Mishra belong to a 400-year-old family tradition of family of great music maestros from Benares. Both brothers have been trained in vocal music under the able guidance of their father, Pt. Hanuman Mishra. In **1979**, they received the coveted Sanskrit Award for musical excellence from the **Prime Minister of India**. Pt. Rajan Mishra and Sajan Mishra are the most beloved and highly regarded vocalists.

SCHOLARSHIPS

With declining public expenditure on higher education and with 80% of higher technical education being in the self financed sector, private engineering institutions need to be closely involved in realizing this national vision. It is necessary to provide scholarships to economically weaker and deprived students to provide equitable opportunities for education. ITM, has established itself as an institute of excellence in professional education and is known for its innovative spirit, has taken one more initiative for implementing these national goals in true spirit. A firm believer in the dictum "Give to society more than what you take from it" and inline with the enunciation of Supreme Court and fee committee decisions, ITM has applied the principle of using the excess funds generated from NRI seats and 10% additional seats for benefiting students such as girl students, students from economically weaker sections of society and students from rural and disadvantaged sections of society, to promote wider affordability.

A number of scholarship schemes offering full and partial tuition fee waivers have been started in year (2006-07 and 2007-2008) with the corpus from excess fee colleted from NRI admitted students and 10% extra seats.

The number of scholarship is as follows:

S.No.	Discipline	No. of Scholarship Available
1.	CSE	12
2.	ECE	12
3.	IT	06
4.	EI	06
5.	ME	12
6.	AE	03

Many of our fears are tissue paper thin, and a single courageous step would carry us clear through them — Brendan Francis

VT

IBM signs Memorandum of Understanding with ITM Gurgaon

IBM India (NYSE: IBM) has signed a Memorandum of Understanding (MoU) with Vishwakarma Institute of Information Technology (VIIT), Pune and ITM Gurgaon, which will enable Pune and Gurgaon based premier educational institutes to conduct IBM India's Accelerated Career Excellence (ACE) programme. Through the ACE programme IBM's Delhi, Gurgaon and Pune based employees would have increased opportunities to be placed at different IBM locations in India and be deployed on different technologies and across business domains.

Mr. Avdhesh Mishra, founder Member Governing Body, ITM, Gurgaon said "ITM was conceived in response to the acute deficiency of centers of higher learning in the country as also, the need to develop relevant human capital to meet the technology and management challenges of the 21st century with well defined mission - to build an institution committed to delivering education of internationally recognized standards, an institution that would go on to serve as an intellectual resource base in India and the sub-continent. Committed to making a profound and lasting contribution to society, ITM recognizes no more exalted role than that of "Educated Citizens" - citizens with a powerful sense of fairness, a profound belief in democratic ideals and a willingness to celebrate talents of many kinds.

ITM assumes no responsibility for the statements and opinions forwarded by the contributors. All possible care has been taken with the correctness of the information contained. ITM will not be liable nor responsible to any person or entity with respect to loss or damages, in connection with or arising from contents of this Newsletter.

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FROM THE PLACEMENT CELL

Institute of Technology and Management has a remarkable placement record and most students have their careers charted out well before they complete graduation. The Institute has always received a good response from well-known industries for the placement of the students. The Placement Cell

handles campus placement of the graduating students. The institute provides excellent infrastructure to arrange the pre -placement talks, written tests, interviews, group discussions etc. as per the requirement of the organizations. This cell also coordinates various activities related to the career of the students along with the industrial training. In addition to campus placement; ITM organizes the Value Addition courses to enhance the personality, communication skills and professional conduct of the students.

Training and Placement Cell is an integral part of the institute. ITM has provided complete infrastructure for effective functioning of the Cell. Training activities are organized throughout the year in an effort towards preparing the prospective students for the campus selection programs. The Cell keeps on inviting various industries and reputed companies for campus placement. The cell is sensitized to function all through the year towards generating placement and training opportunities for the students.

The placement cell of ITM, headed by Ms. Bhumika holds the responsibility of the overseeing the annual placement exercise of the institute. It aims to help the students to find the job they are looking for and also facilitates companies to conduct their recruiting procedure.

As a part of the efforts to develop and strengthen the relationship with the corporate world, ITM has delineated long-term strategy to place Under Graduate students in prestigious organizations.

List of a few Companies recruiting the ITM students through Placement cell:

IBM, Wipro, TCS, Infosys, Satyam Computers, Honeywell Technologies, Syntel Inc. Infosys, Accenture, Sapient, Huawei Telecom, HP, HCL Tech. etc.

The goal is to not just place the students rather help them to build a long-term career with leading organizations.

Each year more than 90% students are placed through this cell. The Training and Placement cell keeps in touch with the industry by inviting them to visit the institute for campus interviews.

Training and Placement Cell organizes sessions of aptitude test, group discussion and guidance programs on How to face interviews, for the students. Placement cell also assists students to produce quality final year project.

Some sessions to interact with the industries and their way of working are also organized in the institute itself by inviting the well known faces of the corporate world.

Some of the recent seminars include Presentation by Indian Air Force; Oracle - Dr. Nandkishore Rathi, Director - Hiring Asia Pacific; TCS - Mr. Rahul Malhotra, Mr. Verma, GM - HR; Infosys - Mr. Sudhir Mishra, Associate Manager Recruitments.

Target Placement for 2009 Batch..............................100%

Dates have been fixed with Top 10 companies in NASSCOM list.
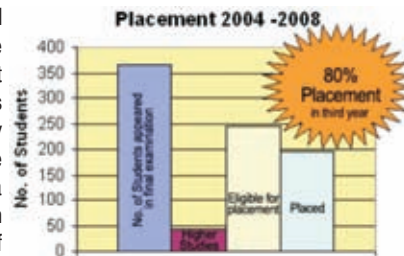
BLOOD DONATION CAMP

Institute of Technology and Management, Gurgaon organizes blood donation camp every year. Donating blood is our social duty. Every year many people die during surgery only because of not getting enough supply of blood in time. By donating blood we indirectly save many lives. This is a prime activity every normal should indulge in, above all casts and ITM firmly believes in this.

Last year, blood donation camp was organized in the month of… with kind co-operation of Rotary club. All staff members and students actively participated in the blood donation camp. About… cc of blood was donated.

We are grateful to all the warm hearted generous people who have happily donated their blood and done exemplary community service. We laud their sense of service and hope their actions will inspire others to come forward and donate BLOOD and save precious human lives.

MOMENTUM-2007

ITM offers excellent, wide-ranging opportunities, re-creational, creative and cultural activities. The institute celebrates its *cultural festival* called **MOMENTUM** a five-day program packed with a number of cultural, technical and literary competitions.

The winners and organizers of the events on the festival were awarded medals, prizes and certificates. **"I shut the doors on yesterday and threw the keys away…tomorrow has no fears for me, for I have found today…"**

The verse signifies the true spirit of **MOMENTUM**, where the analytic and studious minds of students, who are the future of the nation, are taken over by the latent creative genius in them. It is an event, which even a perfectionist, wouldn't hesitate to describe as a complete college festival.

Like every year a large number of students and teachers actively coordinated and participated in various exciting events which were spread over a period of 3 days, spanning from 16th to 19th October, 2007. Preparations for all the events had begun well in advance and the hard work was reflected in performance. Wide arrays of events were a part of the fest in which the hidden skills of many were unveiled.

Day one saw a host of activities in the fields of creative skills and literary events like collage making, rangoli, debates, group discussion, general & Livewire quiz, mono acting etc. Fun events like "ITM dares" and "Cacophony" were especially memorable.

The cultural bonanza really got kick started on the second day of the fest. The day began with the formal inauguration of momentum, followed by the song, dance shows and play. Solo and the duet singing competition, various group and solo performances exhibited exceptional talent. The college Rock Band was a roaring success. They sang various popular English numbers and Hindi chartbusters.

However the star attraction of the day, which kept all eyes, riveted on the stage was the Fashion show. Handsome hunk and beautiful girls from our college played model for gorgeous and mesmerizing kaleidoscopic dresses.

The third and probably the most exciting day began with the ever-popular "**Mr. and Miss Momentum**" contest, which was followed by "Group Dance". Prize distribution ceremony took place at the end of group dance in which those who had won laurels in the momentum were awarded certificates and prizes.

Momentum, since its inception, has always boasted of a rollicking jam session. Over the years, we have had the most talented artists perform for us and this year we chose arguably one of the best Punjabi pop singer of our country "ASHOK MASTEE". His band took center-stage as momentum07 reached its final lap. The crowd swayed and swirled when Ashok Mastee sang his chart busting number "clap on the beat".

The festival was over and the students of the college, not only those who had participated but those also who had witnessed the extravaganza, deserved every word of praise that was showered on them. They had displayed their creative and stentorian skills with utmost élan and made sure that **MOMENTUM 07** lived up to its reputation.

You are your own best friend, closest ally, most faithful companion, and wisest adviser. – Peter Muller