



**CDEEP forges ahead,  
spreading education worldwide**



# REACH OUT



A NEWSLETTER OF CDEEP, IIT BOMBAY

<http://www.cdeep.iitb.ac.in>



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### Partial List of Courses for the Spring (Jan- April) Semester 2009

- Signals and Systems
- Control Systems
- Digital Communications
- System Design
- CMOS Analog IC Design
- Embedded Systems
- Instrumentation and Process Control
- Information Systems
- Theory of Machines & Machine Design
- Computational Fluid Dynamics and Heat Transfer
- Microfluidics
- Environmental Geotechnics
- Advanced Network Analysis
- Computational Biology
- Wavelets
- Digital Protection of Power Systems

For a complete list, visit:  
[http://www.cdeep.iitb.ac.in/spring\\_sem\\_09.html](http://www.cdeep.iitb.ac.in/spring_sem_09.html)

### Are you interested in IIT Bombay's courses?

Visit: <http://www.cdeep.iitb.ac.in/courses>

## IIT Bombay's Postgraduate Diploma Through Distance Mode

CDEEP now brings to you a Postgraduate Diploma (PGD) from IIT Bombay in the distance mode. This is equivalent to a non-thesis Master's degree awarded by many universities in the USA. At the first instance, the PGD will be offered by the Department of Electrical Engineering in two streams: (1) Microelectronics and VLSI (2) Communication and Signal Processing.

To be eligible for this programme, a candidate should fulfill the following requirements: (i) Possess a first class degree in a branch that makes them eligible to appear (if required) in GATE for admission into Electrical Engineering (ii) Have a valid GATE score or two years of relevant experience (iii) Qualify through a written examination or an interview or both, conducted by the Department of Electrical Engineering.

The academic structure of this programme is such that an enrolled student has to pass eight courses with a cumulative grade point average greater than 5.5 and a minimum grade of DD in each course. Of these eight courses, a minimum of four will be in the area of specialization. The level of courses for PGD students is the same as that for IIT Bombay M.Tech programmes. Keeping in mind the time constraints of working professionals, participants are allowed to complete all requirements for the PGD within four years from the admission date.

At present, admission for the PGD programme is proposed to be restricted to

candidates sponsored by industrial organizations and equivalent bodies. The courses available for the PGD will be transmitted through CDEEP and can be seen by students at all our remote centres ([http://www.cdeep.iitb.ac.in/Live\\_edu/remote\\_centres.html](http://www.cdeep.iitb.ac.in/Live_edu/remote_centres.html)). Thus, participants will be able to ask questions during the lecture. They can also interact offline with the IIT Bombay instructor through a Learning Management System (LMS), Moodle. Moreover, all supplementary study material that is posted by the instructor on the LMS may also be accessed. Students shall appear for examinations at the remote centre at the same time as they are held in IIT Bombay and also fulfill other requirements of the course such as assignments and projects. Organisations interested in sponsoring their employees for these postgraduate specializations may contact us at [cdeep@iitb.ac.in](mailto:cdeep@iitb.ac.in).

In future, IIT Bombay is likely to offer PGDs in other streams of Electrical Engineering, i.e. Control and Computing, Power Electronics and Power Systems, and Electronic Systems, as well as in other branches of engineering, sciences and management.

This PGD programme is one more step in making available IIT Bombay's courses to the outside world. CDEEP already offers courses for students and working professionals in the fields of engineering and science. Please visit the links given below to get more information about these programmes.

We are happy to announce that with this issue, Reachout completes one year of publication. Over the past year, Reachout has given information about new developments and programmes of CDEEP to all those interested in engineering studies. We look back and share some milestones with you on the next two pages.

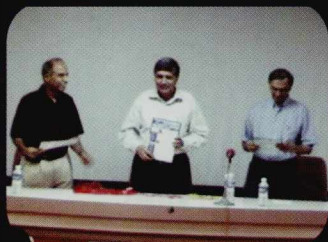
### For more information on CDEEP programmes, please visit

[http://www.cdeep.iitb.ac.in/Live\\_edu/index.html](http://www.cdeep.iitb.ac.in/Live_edu/index.html) for courses transmitted through EDUSAT  
<http://www.cdeep.iitb.ac.in/solo> for free access to Webcast courses  
<http://www.cdeep.iitb.ac.in/NPTEL.html> for NPTEL courses  
[http://www.cdeep.iitb.ac.in/rec\\_courses.html](http://www.cdeep.iitb.ac.in/rec_courses.html) for recorded courses that can be purchased  
<http://www.cdeep.iitb.ac.in/CEP.html> for short term courses  
<http://www.cdeep.iitb.ac.in/pgd.html> for IIT Bombay's grading scheme



## THE YEAR GONE BY... A PHOTO JOURNEY

This is the first anniversary issue of our newsletter, Reachout. Every two months, news and updates about all the happenings at CDEEP are communicated to our readers in India and abroad. A lot of activity has taken place over the last one year. Here, we've captured through photographs some key moments in CDEEP's development over the past year.



Prof. Ashok Misra releases the first issue of Reachout



Inauguration of courses transmitted through EDUSAT, ISRO's education satellite



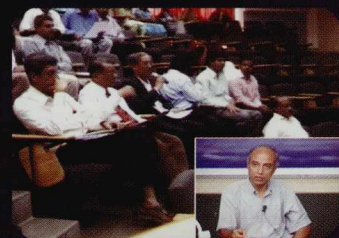
Prof. R. K. Shevgaonkar (left) introduces a CEP course



Webcast courses launched along with a workshop cum training session on Moodle, IITB's Learning Management System



A lecture in IITB transmitted live through EDUSAT and also webcast



CDEEP overview lecture by Prof. K. Moudgalya, Head, CDEEP



Answering questions about CDEEP activities at our stall in the Techfest 2008 exhibition



A celebratory lunch to thank all those who helped



An Open House creates awareness about CDEEP activities



Celebrating Dussehra



CDEEP staff who make it all happen





## THE YEAR AT A GLANCE

Given below are some of milestones achieved over the past year.

Aug. 2007	First Webcast Event-45 <sup>th</sup> Convocation of IIT Bombay First lecture recorded on a virtual set.
Sept. 2007	Live Streaming of the Eklavya TV channel
Oct. 2007	Video on Demand available in IIT Bombay campus CDEEP Open House
Nov. 2007	Reach Out launched
Dec. 2007	Digital Signage introduced
Jan. 2008	Live Courses transmitted through EDUSAT ISRO gives free bandwidth for transmission Innauguration of Webcast Courses with Virtual Classroom Solo Mode launched Workshop for Teachers from Gujarat CDEEP participates in the Techfest Exhibition
Feb./March 2008	Continuing Education Programmes conducted in Gujarat
April 2008	Launch of Tapeless Technology for recording courses
May 2008	Multi-Channel Webcast Technology initiated
June 2008	Continuing Education Programmes in IIT Bombay for Teachers of Gujarat Technical University
July 2008	Autumn Semester starts with 35 courses transmitted live Lectures webcast from five classrooms in IIT Bombay Moodle and Video on Demand available for registered students
Aug. 2008	Online registration system for Webcast courses
Oct. 2008	Post Graduate Diploma (PGD) in Electrical Engineering through CDEEP approved by the IIT Bombay Senate.

### Viewership of our Webcast courses

A large number of students from the following states have watched our Webcast courses:

West Bengal, Maharashtra, Karnataka, Gujarat, Uttar Pradesh, Tamil Nadu, Kerala, Haryana and Andhra Pradesh

Many people from the following countries have also watched our Webcast courses:

Australia, China, Japan, Oman, Hong Kong, Norway, Germany, Singapore, France, Finland, Pakistan, United States of America, United Kingdom and United Arab Emirates

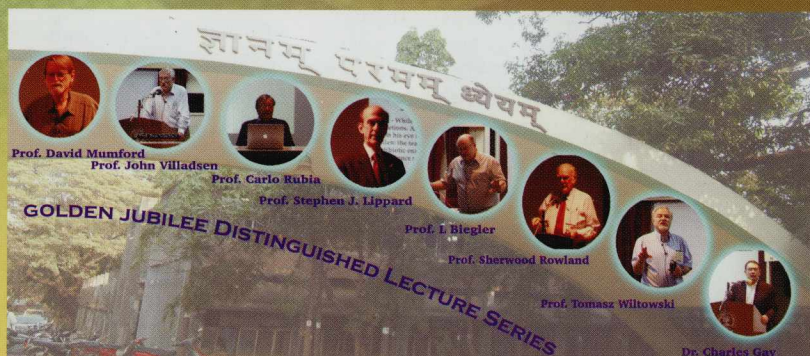
## VITAL STATISTICS

The numbers tell their own story about the growth curve of CDEEP in the last year.

Courses transmitted through Satellite:	22	Number of Events Recorded:	60
Courses Webcast:	41	Centres with Student Interactive Terminals:	57
Undergraduate Courses transmitted:	19	(free reception of satellite-transmitted courses of IITB)	
Postgraduate Courses transmitted:	34	Remote Centres of IIT Bombay:	30
Number of IIT Bombay Faculty involved:	52	Video on Demand Courses (in the IITB Campus):	68
Number of IIT Bombay Departments involved:	13	Recorded Courses (can be purchased by institutes):	59
Continuing Education Programmes through CDEEP:	14	NPTEL Courses-Video:	13
Number of Events Webcast Live:	15	NPTEL Courses-Web:	17

## GOLDEN JUBILEE EVENTS

As IIT Bombay celebrates its Golden Jubilee this year, many distinguished academicians, including Nobel Laureates and a Field Medalist, have been invited to share their ideas with the IIT Bombay academic community. All these lectures have been recorded and many were webcast live by CDEEP. Some of these talks are available at <http://gjubilee.iitb.ac.in/videoList1.do?from=video>



## WEBCAST EVENTS

Not just academicians, but a host of professionals, giants in their own fields, have visited IIT Bombay in the past year. These include Dr. A.P.J. Abdul Kalam, Sunita Williams, Dr. Kiran Bedi and Lakshmi N. Mittal. CDEEP has recorded and webcast these events.

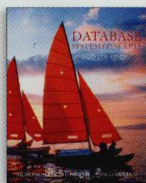




### Database System Concepts

Abraham Silberschatz, Henry F Korth and S Sudarshan

Fifth Edition, May 2005, McGraw-Hill  
ISBN 0-07-295886-3



About two decades ago, when RDBMS and SQL were beginning to gain wide acceptance, two books emerged as the leading texts in this area. One, by Prof. J. D. Ullman, had a strong bias towards theory and was considered to be a difficult book. The other, written by Prof. C. J. Date, emphasized application issues and was perceived to be relatively simple. Many of us tried to use material from both these books, but often the merger of material did not yield the best results.

When Database System Concepts first appeared, teachers were delighted to find that it addressed the theory and systems components, including applications, treating these in equal and just proportions. We were happy to see problems ranging from simple ones that make immediate sense to the uninitiated, to the most challenging which can keep die-hard enthusiasts on tenterhooks.

The field has rapidly advanced in the last two decades, encompassing the Web which necessitates distributed applications to seamlessly interface with each other. The book has tracked these developments and subsequent editions have incorporated relevant techniques. We thus see a segment on object orientation as also on XML. Web-based database applications including servlets, JSP etc., have been covered well, with a separate chapter on information retrieval and data mining. Case studies on Oracle, DB2, and SQL server, to which the current edition adds PostgreSQL, make the book useful even for professionals. The conventional material on SQL, transaction processing, storage structures, and query optimization continues to be the strong point of this book. I have been teaching a graduate course on Information Systems to non-computer science students at IIT Bombay and they have adapted very easily to this book.

These are probably the reasons why, in spite of several other good books being available today, this continues to be the most popular text used for a first course on data bases. I only wish that some day, at least some names of account holders in the examples on banking schema are Indian ones so that our students can more easily relate to them.

### Prof. Deepak B. Phatak

Department of Computer Science and Engg.  
IIT Bombay

### Prof. Ashok Misra



Prof. Ashok Misra obtained his B.Tech. (Ch.E) from IIT Kanpur, M.S. from Tufts University and Ph.D. (polymers) from the University of Massachusetts. After working at Monsanto for three years, he joined IIT Delhi in 1977 where he held positions such as

the Head of the Centre for Polymer Science & Engineering, Dean, Alumni Affairs & International Programmes and Reliance Professor. Prof. Misra was the Director of IIT Bombay from May 2000 to October 2008 and is currently the Chairman, Intellectual Ventures India, Bangalore.

Prof. Misra has co-authored a book, secured 6 patents and has over 100 international publications to his credit. He has guided 19 doctoral and 51 Masters theses and is on the editorial board of two international and two national journals. The numerous awards he has received include the Materials Research Society of India Medal, the Qimpro Platinum Standard Award (Education), the Tufts University Engineering Award, the National Systems Gold Medal of the Systems Society of India, the S.S. Bhatnagar Memorial Award from the Indian Science Congress, Chemtech CEW Award and the Asian Polymer Association Distinguished Award.

Prof. Misra is a fellow of the Indian National Academy of Engineering, the National Academy of Sciences, India (NASI), the Indian Institute of Chemical Engineers and the Maharashtra Academy of Sciences; and an honorary fellow of the Indian Institute of Chemical Engineers and the Indian Plastics Institute. Earlier the vice-president, he is currently the president of NASI.

He is on the board of directors of major Indian companies such as Reliance Industries Ltd. and on the governing board/council of several national institutes like the Tata Institute of Fundamental Research, the Indian Institute of Space Technology, Visvesvaraya National Institute of Technology and Veermata Jijabai Technological Institute. He is also a member of several international committees such as the Academic Advisory Panel of the Government of Singapore.

Email: [amisra@iitb.ac.in](mailto:amisra@iitb.ac.in)  
[ashokmisra47@gmail.com](mailto:ashokmisra47@gmail.com)

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Please send your comments or suggestions to :  
The Editor, **Reach Out**,  
CDEEP, Maths Building, IIT Bombay,  
Powai, Mumbai 400076  
Phone: 022-25764820 Fax: 022-25764812  
Email: [reachout@iitb.ac.in](mailto:reachout@iitb.ac.in)  
Website: [www.cdeep.iitb.ac.in/Reachout](http://www.cdeep.iitb.ac.in/Reachout)

### Q & A

#### 1. What are the courses offered in the next semester?

Please visit [http://www.cdeep.iitb.ac.in/spring\\_sem\\_09.html](http://www.cdeep.iitb.ac.in/spring_sem_09.html) to see the courses offered in the Spring (Jan.-April) semester 2009.

#### 2. When can I enroll for the courses?

Enrollment for Webcast courses start in December 2008. For EDUSAT courses, please visit a conveniently located remote centre ([http://www.cdeep.iitb.ac.in/Live\\_edu/remote\\_centres.html](http://www.cdeep.iitb.ac.in/Live_edu/remote_centres.html)).