

Semester-I notes 2012-13

bitscan

BITS Pilani




Honeywell INITIATIVE FOR
SCIENCE & ENGINEERING



BITS Pilani
Pilani Campus

innovate

achieve

lead

The First Semester 2012-13 was a semester of great achievements and carried on the momentous journey of *Vision 2020* to culmination of *Mission 2012*. The *Mission 2012* was commemorated by holding an event named **Reflections 2012**, which took place at BITS Pilani, Goa Campus on 21 November 2012. Observed and celebrated in the presence and participation of Dr. Kumar Mangalam Birla, Prof. B.N. Jain, Prof. L. K. Maheshwari, Prof. M. Ramachandran, Mr. Kris Ramachandran, Directors of four campuses, Project Managers, Task Force leaders and members from all campuses, the event focused on discussions pertaining to the achievements and shortcomings of the programs listed in accordance with the objectives of the *Mission 2012* document.

That BITS continues to be one of the most sought after academic institute in the country, was evident once again as 1.3 lakh students registered themselves for the BITSAT Online Admission Test for 2000 seats in different campuses of BITS Pilani. The semester started with a warm welcome to those who finally made it to BITS including 24 All India Board Toppers.

Further, keeping in consonance with the innovative spirit of the Institute, two of our faculty colleagues Prof Sanjay Kumar Verma and Prof V K Chaubey collaborated with CEERI to develop a tool to test the quality of water. Senior Scientist Sh SC Bose, CEERI, Pilani provided his guidance and support for the project. Besides this, Prof R Mahesh (Dean of faculty Affairs, BITS, Pilani) along with Dr Asif Mohhamed, Staff Scientist (ICGEB, New Delhi), Jitendra N Verma (Life Care Innovation, Gurgaon) and Dr Laxmi P Kotra (Department of Cell and Molecular Biology, Canada) are working tirelessly on the final stages of discovering a new medicine against Malaria. To give more fillip to research and development, we invited two Noble Laureates to deliver expert talks. Robert J. Aumann who was awarded Nobel prizes in 2005 for having enhanced understanding of conflict and cooperation through game-theory analysis and Prof Aaron Ciechanover who was awarded in 2004 in Chemistry; enriched our students and faculty with their erudite talks.

As always, this semester also saw our students bringing laurels to the institute by winning prestigious awards and prizes in various competitions. BITS Students Team has won an International competition **Eco-Marathon** in Malaysia. Our joy knew no bounds when Google offered Rs 1.22 crore salary package to our three students; Rishabh Kumar Agarwal of Mumbai, Kunal Laad of Nagpur and Nitin Ghangaar of Uttar Pradesh. This is considered as the highest offer BITS Pilani students have ever bagged.

Not only this, the faculty members of the Institute also visited several universities and institutes in India and abroad to broaden their horizon of knowledge and

→ Three students bagged INR 1.22 crores salary package



share their experiences beyond boundaries. This semester a good number of distinguished speakers and experts visited our Institute and delivered talks and lectures to share their domain expertise. Faculty members from various disciplines were also awarded grants by several agencies to carry out research projects in their respective areas.

Reflections 2012 (27 November 2012)

Reflections 2012, a celebration to review Mission 2012 and to redefine Mission 2015 as a part of Vision 2020 programme was organized at K K Birla Goa Campus on 21 November 2012. Dr. Kumar Mangalam Birla, Prof. B.N. Jain, Prof. L. K. Maheshwari, Prof. M. Ramachandran, Mr. Kris Ramachandran, Directors of four campuses, Project Managers, Task Force leaders and members from all campuses, participated in this memorable event. Reflections 2012 witnessed the Task Forces presenting their accomplishments and the tasks yet to be achieved. Members of the staff, both teaching

→ Reflections 2012



and non-teaching of the K K Birla Goa campus were also present at the event. The event was telecast live to the other three campuses.

The Vision 2020 program aims at identifying and

implementing measures that would establish BITS Pilani as one of India's top three research led universities by 2015 and to be counted among the leading 25 technical universities in Asia by 2020. The need to take BITS to global height was first recognized in 2006 by the top level administration of BITS Pilani University, and through an intense collaborative process involving faculty, students, and (non-teaching) staff from all the four campuses, a shape was given to a set of clearly articulated goals around seven key domains: faculty development, curriculum development and pedagogy, research, infrastructure and facilities, work integrated learning programs, governance and administration, and quality of life. This later became BITS's strategic plan and Mission 2012 which shaped Vision 2020 of BITS Pilani. Reflections 2012 primarily focused on discussions pertaining to the achievements and shortcomings of the programs listed in accordance with the objectives of the Mission 2012 document and based on that the Mission 2015 was redefined and shaped.

Nobel laureate Professor Aaron Ciechanover at BITS Pilani

"Are we going to cure all diseases and at what price?" This was the question that was addressed by Nobel laureate Professor Aaron Ciechanover in his talk at BITS Pilani on 29 November, 2012. During his two hour address, he discussed about the evolution of medicine through the ages, the obstacles and bioethical issues that modern medicine faces.

Professor Aaron Ciechanover who received his

Ciechanover is also the recipient of the 2000 Albert Lasker award and the 2003 Israel prize, amongst others.

With a reference to the general complaints that medicine today has become impersonal, Professor Ciechanover said that unfortunately it is this impersonalization of the doctor-patient relationship that, ironically, would give rise to an era of patient participial treatment. He pointed that the promise and success of medicine in the 20th century was illustrated by the fact that in 100 years, we have managed to increase life expectancy by 25-30 years, which is far superior to what we achieved in 4000 years until the 20th century. In fact, current research promises to increase life expectancy by one month each year. All major causes of death which were prevalent until less than a century back have all been cured. However, disease in its entirety has not been eradicated, which is the holy grail of biomedical research.

→ Prof. Jain presenting a memento to Prof. Aaron



→ Prof. Aaron Ciechanover at BITS Pilani



Doctorate of Sciences from the Israel Institute of Technology, Haifa, and did his post-doctoral work at MIT, won the 2004 Nobel Prize for Chemistry for his work on the covalent attachment of ubiquitous to a protein, which signals it for degradation. Prof

Professor Ciechanover also criticized the "one drug suits all" approach, he questioned the reliability of a particular drug for all patients. He therefore, suggested that "we want a medicine that is tailored to our requirements." This issue according to him can be addressed by the revolution of personalized medicine, in which a person's genetic makeup will be analyzed, and only then will a suitable drug be prescribed for him. This further suggests that preventive medication could also develop as an important field in which a person's DNA profile could be studied to determine what diseases could afflict that person in future, and take preventive measures.

Hence, the Nobel talked about the obstacles that personalized and predictive medicine gives rise to. He also stated that "A person in one country might not react to a drug the same way a person in another would" And he maintained that experimenting on humans across geographical locations is inherently difficult and complex, even without the financial burden.

On this occasion, Prof B N Jain honoured Prof Ciechanover and presented him a memento.

academia : a confluence of ideas

Seminars / Conferences / Workshops / Training Programmes

SCHEMCON (21-22 September 2012)

The students' chapter of Indian Institute of Chemical Engineers (IChE) along with the Department of Chemical Engineering, BITS Pilani organized the eighth edition of Students' Chemical Engineering

→ Conference Proceedings being released



Congress: SCHEMCON during 21-22 September 2012. The President of IChE, Shri P Vijayraghvan was the Chief Guest and Prof G Raghurama, Director of BITS Pilani- Pilani Campus was the Guest of Honour at the inaugural function.

A confluence of streams of professionals from academia, research institute and the industry, SCHEMCON is organized annually to provide a national platform for thousands of budding Chemical Engineers across the country and to put forth various innovative ideas to revolutionize the world of engineering technologies. "Attending student conferences is always a good way to update myself with the current day happenings", remarked Shri Vijayraghvan.

'Energy Efficient Technologies for Green Environment' was the theme for this year's congress along with the modern day needs of sustainable energy solutions and green technologies; to cut down the reckless consumption of exhaustible resources. At least four hundred students from various colleges and universities spread across the entire country participated in the conference. The students participated in various competitions like Poster/Paper Presentations, Quiz, etc. Over two hundred fifty research papers in various areas like Bioprocess Engineering, Environmental Engineering, Polymer Engineering and Biotechnology were selected to be

presented by the students. The M P Chary Memorial series of lectures was also held during this conference.

Two-day Workshop on Structural Health Monitoring and Rehabilitation (18 -19 September 2012)

A two day workshop on **Structural Health Monitoring and Rehabilitation** was organized by the Department of Civil Engineering, BITS Pilani, spearheaded by Prof Shamsheer Bahadur Singh. It was attended by thirty two students and featured eight invitee-speakers from elite colleges like IIT Delhi, IIT Kanpur, IIT Bombay, MBM Engineering College, Jodhpur, etc. Prof Tarun Kant, Civil Engineer IIT Bombay was the Chief Guest and Prof. G Raghurama was the Guest of Honour at the inaugural function. A multitude of topics viz. non-destructive and non-invasive technologies like piezo-electric and optical fibres, retrofitting and rehabilitation technologies like bacterial concrete and optimization techniques for a better analysis of data were discussed by the speakers.

→ Prof. S B Singh addressing at inaugural



3rd International ELT@I Conference on Interfacing Language, Culture and Technology (8-9 October 2012)

The 3rd ELTAI International Conference of Rajasthan: Jaipur Chapter was organized in

→ Conference proceedings release at inauguration



collaboration with BITS Pilani. It was attended by 159 participants from across India and abroad.

Prof G. Raghurama, Director BITS Pilani, Pilani Campus, Prof Diane Miller, Regional English Language Officer, Prof Steven Hutchinson, from British Council, New Delhi, Dr. Sanjay Arora, ELTAI, President, Dr. Geetha. B, Head Department of Humanities and Languages, Dr. Pushp Lata, Convener inaugurated the

→ Delegates at ELT@I Conference



conference. Prof Rajul Bhargava, former Head University of Rajasthan and Central University, Haryana was the key note speaker. Clara from British Council, Chennai, Dee Broughton, RELO, New Delhi, etc, were some of the prominent dignitaries present at the inaugural function. There were 16 technical (paper reading) sessions with 107 presentations, 5 plenary talks, two workshops and one penal discussion.

The papers were presented on varied themes such as Intercultural awareness in language learning and teaching, Social and cultural contexts of language teacher education, Immersion of language and culture in pedagogy, Innovative language teaching and learning methodologies, Collaborative language learning and CLIL (Content and Language Integrated Learning), Learner autonomy and self instructional materials, ICT based language teaching/ learning, Developing contents and pedagogies using CALL, Technology interface in distance education, e-learning, virtual learning, Web technologies in language teaching/ learning, Social networks and language learning/ teaching, Applications of web 2.0 in language pedagogy.

significant projects

Principal Investigator and Name of the Department	Title of the Project	Funding Agency	Amount and Duration
Dr. Anu Gupta Dept. of Electrical and Electronics Engineering	Technology Incubation and Development of Entrepreneurs (TIDE) and Expansion of Technology Incubation and Development of Entrepreneurs (TIDE)	Ministry of Communications & Information Technology, Department of Electronics and Information Technology	1.55 Crore 3 Years
Dr. Kumar Neeraj Sachdev Humanities and Languages	A Normative Analysis of Selflessness as the Inner Perspective of Good Life	Indian Council of Philosophical Research, New Delhi	2 Lakhs 2 years
Dr Rajdeep Chowdhury Department of Biology	The Role of Hippo Signaling Pathway Components in Autophagy Regulation in Hepatocellular Carcinoma	DST	23 Lakhs 3 years
Dr. S. Murugesan Department of Pharmacy	Design, Synthesis and Evaluation of Novel Tetrahydroquinoline and Tetrahydroisoquinoline Analogs as anti-HIV agents	DST-SERB	24.75 Lakhs 3 years
Prof Okram M Singh Department of Chemistry, Manipur University	Synthesis of Novel N,O,S Containing Heterocycles and Evaluation of their Anticancer activities	DBT, New Delhi	54.38 Lakhs 3 years
Prof Dalip Kumar Department of Chemistry			

Dr. Dipendu Bhunia and Dr. S. B. Singh	Investigation of the Effect of Carbonation on the Properties of Concrete	DST, New Delhi	34 Lakhs 3 years
Prof K S Sangwan and Dr Christoph Herrmann	Indo-German Automotive Life Cycle Engineering (InGA -LCE) project.	DAAD, Germany	70 Lacs 2 years
Dr Sandhya Mehrotra	Analyzing structural and functional evolutionary links between Rubisco and Carbon Concentrating mechanism (CCM) Proteins.	DST, New Delhi	23.75 lacs 3 years

distinguished lectures at BITS Pilani

SPEAKER	DISCIPLINE	TOPIC
Robert Aumann	Mathematician, Israel	War and Peace
Aaron Ciechanover	Chemistry, Israel	Personalized Medicine
Makoto Kobayasi	Physics, Japan	Development of Particle Physics
Roger Kornberg	Chemistry and Biology, USA	Bridge to the Future
Yuan T Lee	Chemistry, Chinese University of Taipei	Dynamics of Chemical Reactions
Mr Ashish Dhayal,	Brand Manager, Renault India Pvt.Ltd. Chennai	Renault- Success story
Mr. Ankit Chadha	Writer & Performance Artist of Urdu Story Telling, New Delhi	Dastangoi
Mr. Peter Cooke	Head, School of Drama Carnegie Mellon University, U.S.A.	Technology and Art

visits by faculty

Prof. R N Saha, Shri S K Birla and Smt Sarala Birla Chair Professor and Deputy Director, Research and Educational Development visited USA and Canada during 28 September - 12 October on invitation from different Universities, institutes and research centers. Prof. Saha was invited by University of Rhodes Islands (URI) to participate in an international conference organized by School of Pharmaceutical Sciences of URI. He also visited Toure College of Pharmacy, USA (of Toure University, New York, USA), National Cancer Institute, Frederick, USA, USUHS, Bethesda, USA. He delivered lectures on his work on nanoparticulated drug delivery systems at NCI, Frederick.

Dr. Dilip K. Maiti visited the Institute of Computational Mathematics and Scientific/Engineering Computing, Academy of Mathematics & Systems Science, Chinese Academy of Sciences, Beijing, China during 1 - 17 December 2012 and Key Laboratory of Railways Vehicle Thermal Engineering, Lanzhou

Jiaotong University, Gansu, China during 18 - 20 December 2012 under Indian National Science Academy (INSA) - Chinese Academy of Science (CAS) Exchange of Scientists Programme.

Dr. Raj K. Gupta and Dr Manjuladevi V. presented a paper on *Effect of Functionalized CNT on Nematic anchoring* at the 24th International Liquid Crystal Conference 2012 held at Mainz, Germany during 19-24 August 2012. He visited University of Toronto, Toronto, Canada, York University, Toronto, and other research centres and hospitals and delivered lectures.

Ms Lucky Sharan presented a paper on *Design and Simulation of Long-Haul 32 x 40 Gb/s Duobinary DWDM Link in the Presence of Non-Linearity with Under-compensated Dispersion* at IEEE 3rd International Conference on Photonics 2012 (ICP 2012) held in Penang, Malaysia during 1 - 3 October 2012.

Dr. Subit K. Saha delivered a talk entitled *Aggregation behavior of gemini surfactants with a room temperature ionic liquid and microenvironment of mixed micelles in water and water-organic solvent mixed*

media in the World Congress on Oleo Science (WCOS 2012) & 29th **ISF Congress** joint meeting during 30 September - 4 October 2012, held at Arkas Sasebo, Nagasaki, Japan.

Prof. M. S. Dasgupta delivered a plenary talk and presented a paper at the 2nd International Conference on Mechanical Engineering, Materials and Energy (ICMEME 2012) at Dalian, China during 26-27 October 2012, Sponsored by Trans Tech Publications & IEEE Computational Intelligence.

→ Prof. Dasgupta at ICMEME



Dr. Javid Ali delivered a talk entitled *Common fixed point theorems via - distances with an application* in International Conference on Theory, Methods and Applications of Nonlinear Equations held at Texas A&M University, Kingsville, TX, USA during 17 - 21 December 2012.

Dr. Anil Kumar visited Department of Chemistry, Acadia University, Wolfville, Canada during December 17, 2012–January 13, 2013 for collaborative research work with Prof Amitabh Jha's group.

Dr. Anil Kumar delivered a lecture on *Synthesis of biologically active heterocyclic compounds employing multicomponent reactions* at the International Conference on 'Frontiers in Pharmaceutical Sciences: Global Perspectives' held at Department of Biomedical and Pharmaceutical Sciences, University of Rhode Island, Kingston, RI, USA on 30 September 2012.

Prof. K. S. Sangwan presented a paper entitled *Modeling of Stresses and Temperature in Turning using Finite Element Method* in an International Conference on Mechatronics and Computational Mechanics held in Dubai during 20 - 21 December 2012.

Dr. Kamlesh Kumar presented a paper on *Estimation of Tri-axial Behaviour of Pilani Soil Using the Results of Direct Shear Test as a Function of Pore Water Content* at the Second International Symposium on

Constitutive Modeling of Geomaterials: Advances and New Applications (IS-Model 2012), jointly organized by Tsinghua University & IACMAG at Beijing, China during 15-16 October 2012.

Dipaloy Datta presented a paper on *Extraction and Back-Extraction Studies of Picolinic Acid Using Tri-n-Octylamine Dissolved in 1-Decanol at the 2012 AIChE Annual Meeting* held during 28 October - 2 November 2012 in David L. Lawrence Convention Center, Pittsburgh, USA.

enriching the learning experience

invited lectures by faculty

Prof. Navneet Goyal delivered a talk on *Decision Trees and Ensemble Classifiers* in the Workshop on Machine Intelligence held during 10-14 September 2012 by the Department of Computer Engineering, Malaviya National Institute of Technology, MNIT, Jaipur, India.

Prof. Sangeeta Sharma delivered an invited talk on *How to groom personality?* for MBA students at Crown Plaza, Gurgaon on 10 December 2012, organized by Ichieve, a leading consultancy company. She was invited as a resource person for a two day workshop on *The pedagogy of Technical Writing* organized by VNR Vignaan Jyothi Institute of Engineering and Technology, Hyderabad on 6-7 September 2012.

Prof. C. B. Gupta delivered a lecture on *Probability Distributions* and a lecture on *How to Teach?* at JVMGRR (PG) College, Charkhi Dadri (Haryana) and LCRT College of Education, Panipat (Haryana) on 20 September 2012 and 21 November 2012 respectively.

Prof. S.B. Singh delivered a lecture on *Structural Applications of Ductile Cementitious Composites* at MNIT Jaipur on 22 December 2012.

Dr. Poonam Goyal delivered a talk on *Incremental Mining Algorithms and their Role in Data Stream Mining* at short term course on "Machine Intelligence" during 10-14 September 2012 organized by Department of Computer Engineering, Malaviya National Institute of Technology, Jaipur.

Dr. Jitendra Panwar delivered a lecture on *Nanoparticles Controllable Synthesis and Characterization* in a Short Course on Application of

nanotechnology in soil science and plant nutrition research, Indian Institute of Soil Science, Bhopal, India on 18 September 2012.

Prof. P. Srinivasan delivered a lecture on *Boiler tube failures- Causes and Prevention* at A P Cement works at Tadpatri to the working professionals in the Thermal Power Plant Division on 24 December 2012.

Prof Arya Kumar delivered an invited talk in *Entrepreneurial Opportunities* to the students of VIT Jaipur on 1 September 2012. He delivered an invited talk in the Entrepreneurship Awareness Drive organized by IIT Kharagpur in association with Amity University on 15 October 2012 and MGIT, Hyderabad on 18 October 2012 and at SIES Graduate School of Technology in Mumbai on 19 October 2012 on Basics of

Entrepreneurship and What it takes to Teach Entrepreneurship. Prof Arya Kumar conducted a workshop on behalf of Pearson for around 200 MBA students and 25 faculty members from different colleges to inculcate the spirit of entrepreneurship amongst students and how to make entrepreneurship learning an enjoyable experience in Siva Sivani Institute of Management, Secunderabad on 19 October 2012. Prof Arya Kumar participated and contributed in the Faculty Advisors annual meeting of National Entrepreneurship Network (NEN) for reviewing the performance and chalking out strategy for future on 29 - 30 November 2012 at Bangalore. He has also joined the Faculty Advisory Board of E-Cell IIT Kanpur which is a non-profit organization to inculcate and unveil the spirit of entrepreneurship amongst the students.

academic attainments of faculty

S.No.	NAME	DEPARTMENT	JOURNAL / MEMBER DETAILS
1.	Dr. Pinto Modak	Physical Education	Appointed as Member of the Panel of Reviewers of International Journal of Physical Education, Health & Sports Sciences. Appointed as a resource person by International Non-Olympic University for Syllabus framing and question paper setting. Reviewed 3 papers for International Journal of Sports and Health Education.
2.	Prof. Rajiv Gupta	Civil Engineering	Reviewed papers for Recent Trends in Civil Engineering & Technology (STM Journals), Smart and Sustainable Built Environment, Emerald, Construction & Building Materials, Elsevier, Indoor and Built Environment, SAGE Journals, UK and Journal of Agricultural Science and Technology, Iran
3.	Prof. Sangeeta Sharma	Humanities and Languages	Appointed as Member of Advisory Council of AIMS International, Member of editorial board for Innovation: The Journal of Management, Poddar Institute of Management, 2012
4.	Dr. Rajesh Mehrotra	Biology	Reviewed a paper for Catalysis Letter published by Springer.
5.	Dr. Pushp Lata	Humanities and Languages	Appointed as Co-editor for journal of Education, JSTF, Singapore and Guest Editor for ELT Research Journal, Canada. Reviewed two research papers for an international journal, Arab World English Journal and one for the International Journal of Social Sciences and Humanities by Pertanika Publishers and one for Art and Culture, A Journal of Bioinfo Publications.
6.	Dr. Sushila Shekhawat	Humanities and Languages	Appointed as the Reviewers in charge for the International Journal of Law and Social Sciences (GSTF, Singapore)
7.	Dr. S. Murugesan	Pharmacy	Appointed as referee for Archiv der Pharmazie. (Wiley Interscience), Appointed as referee for World Applied Sciences Journal (Iran), Appointed as

S.No.	NAME	DEPARTMENT	JOURNAL / MEMBER DETAILS
			referee for International Research Journal of Biotechnology, Appointed as referee for Letters in Drug Design and Discovery (Bentham Sciences), Appointed as referee for African Journal of Pharmacy and Pharmacology, Appointed as referee for International Journal of Research in Chemistry and Environment from Indore, (M.P), INDIA, Appointed as referee for International Journal of Pharma and Bio Sciences, Appointed as referee for Scipharm, Appointed as Editorial advisory board member for International Journal of Research in Pharmaceutical and Nano Sciences, Appointed as referee and Editorial advisory board member for Journal of Medical Sciences (Wyno Academic Journals), Appointed as author for International Pharmaceutical Writers Association (IPWA).
8.	Dr. C B Gupta	Mathematics	Reviewed 5 papers for Ganita Sandesh, an international journal.
9.	Dr. Rakesh Choubisa	Physics	Representing BITS, Pilani in an international project on "A Multiple Scattering Computing Platform for (Nano) materials" funded by European Commission under Marie Curie International Research Staff Exchange Scheme (IRSES) of 7th Framework Programme (FP-7). The project has started on 1st Sept. 2012 and will last for four years with total funding € 2,69,200 for the Consortium in the project.
10.	Dr Jitendra Panwar	Biology	Reviewed two papers for Letters in Applied Microbiology and PLOS ONE.
11.	Prof. S B Singh	Civil Engineering	Selected as Program- Coordinator of UGC SAP Program for 2012-2017. Reviewed one paper for International Journal of Construction and Building Materials (Elsevier).
12.	Prof. Rajiv Gupta	Civil Engineering	Reviewed six papers for Recent Trends in Civil Engineering & Technology, Smart and Sustainable Built Environment, Emerald, Construction & Building Materials. Elsevier, Indoor and Built Environment, SAGE Journals, UK, Journal of Agricultural Science and Technology, Iran.
13.	Prof. Arya Kumar	Management	Reviewed two papers for Quarterly Journal brought out by ISS, Jaipur National University and 2 papers for Journal brought out by IMS, Greater Noida. Appointed as Member of selection committee of STIDE for investment proposal in the area of ICT and member of Governing Body of STIDE of Central University of Rajasthan.
14.	Prof. Subit Saha	Chemistry	Reviewed four research papers for the Journal of Materials Chemistry (published by the Royal Society of Chemistry), Journal of Molecular Liquids (published by Elsevier), Journal of Solution Chemistry (published by Springer) and Soft Matter (a journal published by the Royal Society of Chemistry)

Joining hands : MoUs

Sustaining the collaborative efforts, BITS signed the MoUs with the following institutions and organizations in India and abroad to promote academic, education and research interaction and cooperation; to facilitate exchange of faculty and students and to facilitate student exchange and training:

- Avaya India Pvt. Ltd, Pune
- BMC Software India Pvt. Ltd., Pune
- University of Rhode Island, Rhode Island, USA
- Medici Institute of Medical Sciences, Hyderabad
- MITACS Inc., Canada
- UOP India Ovt. Ltd., New Delhi
- International Center for Biosaline Agriculture, UAE
- Kirloskar Oil Engines Ltd., Pune
- USC Veterbi School of Engineering, USA
- RAK Medical and Health Sciences University, UAE
- New Mexico State University, USA

accolades and achievements

Prof. Arya Kumar was conferred with Global Excellence Award for outstanding contribution to Management Education by Management Teachers Consortium (MTC), Bangalore in their Annual Convention 2012 held on 1 September, 2012 at Jaipur.

Ms. Jayashree Mahesh received the **Best Paper Award** in the track 'Growing Indian Multinationals', presented at an International Conference on Management with the theme 'Management in the New World Order - Concepts and Practices from India' held at IIM Ranchi during 13-14 August 2012.

Dr. Rajesh Mehrotra has been bestowed with the honor of Fellow of Society of Applied Biochemistry.

Dr. S Murugesan was awarded 3rd prize in poster presentation at World Conference on HIV and AIDS organized by Institute for Holistic Medical Sciences, Kottayam and Ayurveda-Und Venen-Klink, Austria. November 09-11th, 2012.

Dr. Sandhya Mehrotra received INSA Early Career Scientist Award to carry advance research in the area of photosynthesis.

→ Gaurav Ghosh receiving Aditya Birla Scholarship



Suvonil Chatterjee (2010A8PS337P) received **BITSAA Global 30 under 30 Awards - Invention & Innovation** at the BITSAA Global Meet Awards, 2012 on 20 September 2012.

Keshav L (2008B4A3545P), **Praful Kumar Parakh** (2008B3A3383P), **Rubin Kothari** (2009A3PS108P) and **Nidhi Jaypalan** (2009A3PS062P) received the **Runners-up in Bachelor's Category at Cadence Design Contest 2012** held in Noida in September 2012.

Gaurav Ghosh (2012A3PS001P) received the **Aditya Birla Group Scholarship** in an event held at ITC Grand Central, Mumbai on 22 September 2012.

Ankit Kumar Rout (2011A4PS313P) received the **Avery Dennison InvEnt Scholarship** from Avery Dennison Foundation "InvEnt" Scholarship Award Ceremony on 4 October 2012 at the Davos Hall, MovenPick Hotel & Spa, Bangalore.

Siddharth Bhatia (2011B4A7680P) was one among the 250 students chosen from 24 countries to participate in this year's **Asian Science Camp** held at Hebrew University, Jerusalem during 25-31 August 2012. Siddharth's visit was sponsored by Department of Science and Technology, Government of India.

Sijo V M (2012A4PS012P) won **Silver Medal** in BOSM for BITS A Team, **Silver Medal** for Tennis in BOSM held on 13 September 2012.

Sankar Ramachandran (2012H106113P) won **First Prize in Poster Presentation Competition**, Energy Engineering in SCHEMCON12 hosted by BITS Pilani in September 2012.

Divya Joshi (2010A3PS160P) and **Anupam Purwar** (2009A4PS301P) won **First Position in Tech Bazaar 2012**, the Annual Technical Innovation Competition of BITS Pilani on 19 August 2012 in New Delhi.

Anirudh Batra (2009A8PS252P) scored **All India Rank 1 in CMAT 2012** and also participated in National Level Essay Competition organized by

Competition Commission, India.

Avanish Bankar (2010A4PS036P), **Alok Pacholi** (2010A4PS367P) and **Aman Khurana** (2010B1A4820P) have been granted a provisional patent for "Mechanical Rollback Prevention System Using One Way Clutch" and recently they have also submitted the final draft of the patent to the patent office, Mumbai.

Ravi Aswani (2010C7PS510P) bagged a **Consolation Prize** in **National Level Essay Competition 2012-** organised by Competition Commission of India.

renewing the bond

BITSAA

51 alumni members of 1962-67 batch and their families made a golden jubilee re-union visit to the Institute during 24-26 November 2012. It was a great occasion for the alumni since most of them saw each

→ 1962 Alumni batch at BITS

BITS 1962 GOLDIES



other after a long gap of 45 years. On 25 November, there was a meeting of the alumni with the Vice Chancellor, Prof B N Jain, Director, Prof G Raghurama and other faculty members. Addressing the alumni, the Vice Chancellor briefly mentioned the changes that have taken place in the institute during 1967-2012. Mentioning about Vision 2020 and Mission 2012, the Vice Chancellor said that several steps are being taken in order to transform BITS into a research led university. Director, Prof G Raghurama, in his address, mentioned about Project Parivartan at Pilani campus which includes construction of new academic block, workshop, students hostels, faculty housing complexes and renovation of all buildings in the campus. Replying to the addresses by Vice Chancellor and Director, the alumni

→ Library visit



members assured all support to the Institute. More than 190 Alumni with a total number of more than 280 participants including family members participated in a Silver Jubilee Reunion organized during 12 - 14 October 2012. Prof B N Jain, Vice Chancellor and Prof G Raghurama, Director, in a special session organized for alumni, shared the developments happened ever since the batch left the campus and future thrust areas with a special emphasis on research to take the institute to greater height. A special interactive session with leading Alumni of the batch for the benefit of students in the area of Career Planning; Entrepreneurial Track and Academia and Research was organized. The Batch felicitated their teachers who taught them, in a special function organized for the same.

Graduating Tea Party

The Graduating Farewell Tea Party for the passing out students of 2009-2013 batch was held at VFast Hostel on 6 December 2012. Prof B N Jain was the Chief Guest. Prof Jain congratulated the students and conveyed his best wishes to them for the challenges ahead.

Prof G Raghurama, Director, also congratulated the students and wished them great luck to achieve their dreams.

→ Students at Graduating Tea party



Prof Arya Kumar, Dean, SWD, Dr S K Choudhary, Chief Warden, Prof Surekha Bhanot and other faculty members were also present on the occasion.

creative zone

Ragamalika

The first semester of the academic year 2012-13 started with their flagship event Nrityaranjani held on 26 September. The show started with three introductory pieces. Dancers Saumya and Rucha, trained in Bharatanatyam performed an 'Alarippu', an invocatory piece to seek blessings of the audience. Next was classical dance form Odissi by veteran third year student Kuheli, who sought to elaborate the raga Arabi through fluidic eye movements, followed by a Kathak piece by fresher Radhika. The show sought to showcase an evening of music and dance on 'Anuragita', a symphony on love; Love, the most fundamental of human emotions. Love, a source of surprise and confusion was depicted in its various forms namely maternal love, friendship, guru bhakti, adolescent love, marriage, patriotism and the ultimate love towards the God. The club also organized a freshers concert on 25 October where new recruits trained in the Carnatic and Hindustani disciplines were given an opportunity to prove their mettle.

MATRIX

In the first semester of the academic year 2012-13, MATRIX screened a movie with a sports theme- "Invictus", and conducted an event- "Shipwreck" for BITS Open Sports Meet (BOSM). Thereafter, MATRIX organized a book introduction session on 22 September, in which four books were introduced by the four panelists. Dr. Kumar Bhattacharya gave a riveting introduction to J.G. Farrell's "The Siege of Krishnapur". Swapnil Haria brilliantly introduced the "Foundation Series" by Issac Assimov. Vivek Sharma introduced "The Wheel of Time Series" by James Rigney.

Our senior member Padmanabhan Anand introduced Haruki Murakami's "Norwegian Wood".

PARADOX, a quiz revolving around art, literature and movies was conducted as a pre-Oasis event.

This quiz was efficiently managed by Prathamesh and Simha. During Oasis, MATRIX conducted two events and three movie screenings. TRIATHLON had a huge participation of about 500 students. The 'Movie Quiz' was conducted by Trishanu Borah and Prem Parekh and had a good number of movie buffs as participants.

In mid-October, Matrix in collaboration with Management Association, conducted a book launch followed by the guest lecture on "101 Myths and Realities @ the Office" by Utkarsh Rai.

Post-Oasis, another book introduction session was conducted on 26 November 2012 which consisted of five panelists introducing five books. Deepraj Sarmah introduced the classic animal book *My Family and Other Animals* by Gerald Durrell. Ravi Ranjan gave a thought provoking introduction to Richard Darwin's *The God Delusion*. Viknesh Nagarhinam on *Deadhouse Gates* by Steven Erikson; Shreyas Vatsa on *Things Fall Apart* by Chinua Achebe and Tanayveer Singh on *1984* by George Orwell. Apart from these, Matrix also had internal movie screenings of "The Big Lebowski" and "Strangers on a Train" for the members.

caring beyond our walls

Conquest (19 August 2012)

Conquest 2012 was held on 19 August 2012 at Sri Sathya Sai International Centre, New Delhi. Prof G.

→ Dignitaries at Opening Ceremony



Raghurama, Director BITS Pilani - Pilani Campus inaugurated the event and Prof Arya Kumar shared in brief about Conquest and entrepreneurship development activities being undertaken by the Center for Entrepreneurial Leadership (CEL) at BITS Pilani. Conquest's key focus 2012 was to help scale early stage start-ups by providing the best resources. Mentoring, technology, traction and investment are things which any early stage start-up needs in order to grow fast and scale up. Conquest 2012 had the best of mentors in the form of start-up cofounders who had run and sold multiple companies.

Managing Directors from the biggest VC firms namely Sequoia, Canaan, Nexus, Accel, Blume, Kae Capital, Mumbai Angels, Indian Angel Network, Hyderabad Angels, Freemont, Hatch, GSF, Aegis etc. were a few who graced the various events.

→ Prof. Bhat and Prof. Arya Kumar presenting certificate to winners



The highlight of Conquest 2012 was diversity of the start-ups ranging from web to healthcare to media and even clean tech. Out of the top 60 teams in the semi finals, more than 40 of them were registered companies which had gained substantial traction to impress mentors and investors with their pitches.

Tech Bazaar 2012 was also held on the same day at Sri Sathya Sai International Centre, New Delhi. ED&IPR Unit at BITS Pilani - Pilani Campus has been conducting Tech Bazaar, since 2006. It provides a rare opportunity to students, professionals; scientists and members of the academic world to show case their innovative ideas. This year a total of 196 teams registered for the event from India and abroad and out of which 11 teams competed in the final round. Selected teams were also given mentorship prior to the event. Tech Bazaar 2012 was sponsored by Technology Development Board, Government of India as a Gold sponsor. The event provided an ideal platform for budding entrepreneurs to roll out concrete plans for transforming their innovative ideas into viable business ventures and networking with experts and venture capitalists.

Engineer's Day (15 September 2012)

On the auspicious occasion of Engineer's Day, BITS Pilani organized an event in which the students as

→ Prof. Raghurama lighting the lamp



well as the faculty members actively participated. Prof G. Raghurama, Director, BITS Pilani, Prof A.P. Singh, Dean, Instruction Division, faculty members of different discipline associations and students of various disciplines were a part of this event.

It started with a short video clipping highlighting the life sketch of Sir M. Visvesvaraya. The theme of this Engineer's Day celebration was 'Appropriate Climate Responsive Technologies for Inclusive Growth & Sustainable Development.' To elaborate on this theme, the Prof-in-charge of Mechanical Association, Dr. M.S. Soni, briefed the students regarding the various technological advancements in the field of Sustainable Development. Each presentation was followed by a quiz and the winners were selected.

BOSM

(13-17 September 2012)

The 27th Annual Sports Meet, BITS OPEN SPORTS MEET (BOSM-2012) got off to a spectacular start in Pilani on 13 September 2012. 860 students participated this year from around 50 colleges. The Event was inaugurated with lighting of the lamp by the former Indian wicketkeeper, Mr. Saba Karim, the Chief Guest for BOSM-2012; Charles Borromeo, the winner of the prestigious Padma Shri and Arjuna Award, Charles Borromeo, a track and field athlete and Andrea Thumshirn, Olympic Hockey Silver-Medallist of Germany and Prof G. Raghurama, Director, BITS, Pilani as Guests of Honour. A brilliant show was put up by renowned jugglers The Joseph Brothers, showcasing exemplary coordination and skill which earned them standing ovation from the audience.

The five-day fest witnessed many events with each game cheered by enthusiastic audience and competitive players. Khalsa won the Boys Basketball and LNUPE took over the Girls Basketball league. SKIT and JMC won the Volleyball Boys and Girls tournaments respectively. St. Xavier, Kolkata knocked out everyone in Football and SRCC won the Hockey tournament this year. BITS Pilani aced in Cricket, Badminton, Swimming, Chess and many other events. The all-

→ Basketball match at BOSM



rounder of the fest among outside colleges was bagged by a jubilant SRCC. The fest was a great success without the involvement of most of the student population, thus, there were a variety of events set to draw crowds towards different game venues. The ever popular Street Football, Box Cricket, RC Racing, Human Foosball, Anti Chess, Bazinga, Pacman and Cracodial are a few more events organized so to make the fest more thrilling.

Besides these, NSS and Sports Council BITS Pilani took up JUNOON, a pre-BOSM event on 2 September 2012 to honor sports and salute the undying fighting spirit of the specially abled which had nearly 100 participants from Umang, Muskaan, Amla Birla School and other NGO's, all fighting for sporting glory. Many of them have already made their names in the Special Olympics.

OASIS

(2-6 November 2012)

BITS Pilani celebrated the 42nd edition of OASIS, its annual cultural festival during 2 - 6 November 2012. It

→ Dance performance at opening of OASIS



attracted about 1500 outstation participants from about 85 colleges situated all over the country.

The festival hosted as many as 65 events which

→ Students performing at Razmataz



were based on music, art, dance, drama, literature, photography and every other cultural aspect of college life. The theme of the festival was "The Re-invention". The Music show by Bombay Vikings along with Mr. Neeraj Sridhar, a killer comedy show-N2O featuring Mr. Virdas were few of the highlights of the festival. The festival also featured rock bands like TAAQ and The Shakey Rays. Dance, music and pottery workshops were held by professional artists and performers. Events like Rapwars, Desert duel, street plays, fashion parade, DJ night, Mr. and Mrs. OASIS etc. caught the limelight as the students from all over the country were

UGC Centre for Women Studies

UGC Center for Women Studies, BITS, Pilani organized a training programme on "Effective Handling of Electrical Appliances" on 30 September 2012, to make people aware about the handling, home - maintenance and easy repair of domestic electrical appliance and to promote awareness about saving electricity. Prof Sangeeta Sharma, Coordinator, UGC Centre for Women Studies coordinated the event along with Madhusmita Das.

→ Participants at Electrical Appliances Workshop



The resource person for the Workshop was Prof Surekha Bhanot, Department of Electrical and Electronics Engg and Instrumentation. A workshop on "Obesity Management" was also organized by the Centre on 17 November 2012 at BITS, Pilani, to make people aware about the causes of obesity, its real assessment and management and the diseases caused by it. The resource person for the Workshop was Dr. R. P. Pareek, Medical Superintendent, Medical Centre, BITS, Pilani.

NSS

Last semester, NSS along with Nirmaan organized Junoon, a sporting journey for differently-abled. Junoon witnessed over a hundred participants

from five NGOs. Along with the athletic events, a “unified basketball match” was organized where BITS students joined these special stars with the idea "One World, One Dream". NSS, Nirmaan Organisation and Staff Association organized Inter School Quiz and Speech Competitions to commemorate 150th Birth Anniversary of Swami Vivekananda. With the idea of promotion of the work of NGOs, NSS put up a stall in OASIS 2012. Apart from these events, NSS also runs the NSS School where Children of mess workers, sweepers and other under privileged sections of our campus and nearby areas are mentored by 65 volunteers. The Computer Literacy Program has also been initiated at Pilani Resource Centre. As a follow-up of a survey on Health and Hygiene Awareness, an Oral Health Camp was also conducted on 21 October 2012.

NIRMAAN

The semester got off to a great start for Nirmaan with the setting up of Pilani Resource Centre (PRC) which enabled the shifting of Gyan Bodh classes to a more closed environment. Shiksha Ki Ore succeeded in admitting 17 of its kids to a school and also built an informal school in Nattbasti. Utkarsh (previously ICS) awarded 41 scholarships to deserving students while Disha conducted career workshops for over 1000 students in and around Pilani. Participative Community

Development was introduced to increase community involvement in the projects.

SHG-Khedla came up with improved notebooks and SHG-Baas started the production of cellulose bags. Parishodh completed Shri Kshethra Dharmasthala Rural Development Project (SKDRDP), a volunteer management project.

As a part of the year long celebrations of Swami Vivekananda's 150th Jayanti, elocution and quiz competitions were conducted for students of the nearby schools in the college campus.

Joy of Giving Week was celebrated in the second week of October with events like 'Hour Of Joy', 'Day of Joy', 'Cycle of Joy', 'Kaun Kehlayega Genius (KKG)' .The concept of 'Wish Tree' evoked a very good response.

During Oasis, Nirmaan conducted two events, Big Fight and Head On, which were very well received. The Nirmaan stall had a variety of products including Kurtas, Wallets, Handbags, and Diyas. Apart from these, this year, Macrame products like wall hangings, keychains and pen stands were also introduced.

The 66th Independence Day was celebrated with great fervor, in the communities of Khedla, Baas, Harinagar and Nattbasti. In Harinagar, a tree plantation drive and several other programmes like drama and poetry reading were organized for school children.

introducing new faculty

S. No.	Name	Designation	Discipline
1.	Holkundkar Amol Ramdas Shilpa	ASTP	PHY
2.	Uma Maheswari N	VFAC	PSD
3.	Subrata Bandhu Ghosh	ASTP	MECH
4.	Gaikwad Anil Bhanudas	ASTP	PHA
5.	Sangita Yadav	ASTP	MATH
6.	Praphulla Chandra Shukla	ASTP	BIO
7.	Rajdeep Chowdhury	ASTP	BIO
8.	Remica Aggarwal	ASTP	MGTS
9.	Dinesh Yadav	VFAC	HULA
10.	Sumana Ghosh	ASTP	CHEG



editorial team

Editor: Dr. Pushp Lata

Members of Editorial Committee: Dr. Virendra Singh Nirban and Dr. Sushila Shekhawat

Special Thanks to Piyush Gupta, Arun Poonia and Neerja Vyas

innovate

achieve

lead

BITS Pilani

Pilani Campus

mediaspeak



Birla Institute of Technology & Science, Pilani
Pilani Campus, Vidya Vihar
Pilani 333031, Rajasthan, India

Tel : +91 1596 245073
Fax : +91 1596 244183
Web : www.pilani.bits-pilani.ac.in