

MNIT NEWSLETTER

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MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

MNITJ NEWS

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Director's Message

Malaviya National Institute of Technology Jaipur stands for quality education and a serious commitment to maintaining high standards of teaching and research. Recent years have witnessed tremendous changes in the institute, in terms of academic and other activities conducted, and also the continuous development of the general infrastructure.

The Institute yet again witnessed various activities in the quarter such as a conference on sustainable neighbourhoods, a significant issue in today's society. Numerous lectures, training programmes and workshops were organised to attend which experts from institutes of world renown such as the Jamia Millia Islamia, New Delhi, National Institute of Hydrology, BITS Pilani, IIT Roorkee, and the University of Saskatchewan visited our campus and shared their immense knowledge on a wide range of contemporary issues like global warming, advances in lighting technology, molecular semi-conductors, promoting techno-entrepreneurship and intellectual property rights. Interactive meets between the industry and academia helped foster a better understanding of the needs of today's world.

The world today is a rapidly evolving one wherein technological advancements are being made with amazing speed. In order to keep apace, and to promote research and development, the Institute has been focussing more and more on collaborative efforts and on developing ties with our alumni. Our faculty members continue to receive prestigious projects that will make significant contributions to the society. The multitudinous activities reflect the vision of the Institute that education should be geared towards making individuals aware of the needs and concerns of the society he or she lives in and be sensitive to any changes thereof.

Jai Hind

Prof. I. K. Bhat



Vision

To create a center for imparting technical education of international standards and conducting research at the cutting edge of technology to meet the current and future challenges of technological development.

Mission

To create technical manpower for meeting the current and future demands of industry; To reorganize education and research in close interaction with industry with emphasis on the development of leadership qualities in the young men and women entering the portals of the Institute with sensitivity to social development and eye for opportunities for growth in the international perspective.

Workshops/Conferences/Short-Term Courses/Training Programmes Conducted

❖ **The Department of Architecture and Planning, MNIT Jaipur** organized a National Conference on “*Sustainable Neighbourhoods: Theories and Practices*” from February 21 to 22, 2014. The conference targeted one of the most crucial issues which humanity is facing today, i.e. sustainability

The conference focussed on different prevalent issues of sustainability faced by humanity for planning and design of neighbourhoods in particular and the city as a whole. It was organized by Dr. Satish Pipralia, Dr. Ashwani Kumar, Ar. Niruti Gupta and Ar. Pooja Nigam with the valuable presence of **Ar. P. K. Pandey**, Member Secretary, State Commission of Urbanization, Rajasthan as the Chief Guest and **Dr. V. Devadas**, Professor, Department of Architecture & Planning, Indian Institute of Technology Roorkee as the Guest of Honour.



❖ A one-day workshop was organised by the **Department of Metallurgical and Materials Engineering** on “*Industry-Academia Interaction for*

Engineering Students” on March 11, 2014 for faculty members, research scholars and M.Tech. students under TEQIP-II program. Total participants were 70. The experts came from different industries i.e. Hariom Precision Alloy (P) Ltd., Alwar, Sigma Electric Private Ltd. Jaipur, BOSCH Ltd., Jaipur, Kamtech Associates, RIICO. The Convener of the workshop was Prof. Ashok Sharma, and Co-Convener was Dr. Rajendra Kumar Duchaniya.



❖ **The Department of Electronics and Communication Engineering**, organized a one-day research symposium and exposition for the Alumni, parents and Industry personnel on March 30, 2014. Dr. Satyasai J. Nanda and Mr. Amit M. Joshi were the Coordinators. Prof. R. Goyal presented the recent developments of research work being carried out in the institute. Prof. V. Sahula highlighted the significance of research in the recent trends of electronics. The PhD and M.Tech students of the department presented technical posters and B Tech students presented live

models of electronic projects. The research symposium brought a unique environment where the Alumni and Industry personnel shared their ideas to improve the quality of education.



❖ A function to felicitate the efforts of students of Alumni Committee (AICom) was organized on March 22, 2014. In the function an MoU was also signed between the Institute and batch representatives of 1988 batch, which says that the 1988 batch will gather funds and regulate an annual sponsorship to the needy. The Student Coordinators of every field were felicitated by the Director for the splendid work they did in the whole year. This motivated students to work with zeal in the upcoming events.



During the event Prof. Dilip Sharma (Coordinator, Alumni Committee) gave a brief insight into the events held in the past. The Alumni magazine which was inaugurated on December 25, 2013 at the reunion of 1988 batch was distributed to about 2000 alumni. The Training and Placement Committee of the ACom did a splendid job and have created about 250 vacancies in top notch companies like ONGC, RIL, IOCL, HPCL, etc. It is expected that a similar number of vacancies are in line to get final approval from different managements. The mentorship programme which was launched recently has got a great response. We have about 200 mentors who are ready to mentor about 300 students. The Chapter Team was successful in authorizing the Bangalore Chapter. New chapters are going to be inaugurated in cities like Hyderabad and Delhi.

❖ A one-day Awareness Camp on **Intellectual Property Rights** (IPR) was organized by IPR Cell, MNIT Jaipur and Department of Science and Technology (DST), Jaipur (Rajasthan) on March 26, 2014. The session was chaired by Prof. S L Soni, Coordinator, Training and Placement and Prof. Dilip Sharma, Coordinator, IPR Cell, was the Convener of the camp. The camp was well attended by



78 faculty members and students of MNIT Jaipur, SKIT, Jaipur, VIT, Jaipur and Manipal University, Jaipur.

Prof. Dilip Sharma briefed the audience about various activities being held at IPR Cell, MNIT Jaipur and about patents applied by MNIT Jaipur so far. Prof. Soni discussed the importance of IPR in academic institutions. Mr. Shaswat Purohit from World Intellectual Property Organization (WIPO) (a body of United Nations) shared his wisdom about global IPR, legal aspects of IPR with numerous examples of real IPR cases worldwide. Mr. Vikas Asawat, a patent attorney from NOIDA, spoke on various types of intellectual properties and scope for filing under each category.

❖ Four lectures were organized by the **Department of Civil Engineering** for the CE 436 Water Conservation Technology course by the Course Coordinator, Prof. Rohit Goyal. Two of these lectures were organized on NKN facilities. These lectures were on “Feasibility and design of rainwater harvesting system in Jamia Millia Islamia campus New Delhi” on April 16, 2014 by Prof. Gauhar Mahmood, Dept. of Civil Engineering, Jamia Millia Islamia and three lectures on “Classification of Climate Regions with special emphasis to Arid and Semi-Arid Climate Regions” on March 10, 2014, “Global Warming and Climate Change: Impact on Water Resources” on April 25, 2014 and “Global Warming and Climate Change: Adaptation and Mitigation Strategies” on April 26, 2014 by Dr. Archana Sarkar, Scientist, National Institute of Hydrology, Roorkee.

❖ MNIT-DRDO-OFB Meet



was organized on April 25, 2014 with the primary objective of the interactive meeting with DRDO and OFB personnel for the development of a sustainable relation for futuristic research work on defense requirements.

Officials from DRDO and OFB attended the meeting on the invitation of Director, MNIT, Jaipur, and included Mr. V.K. Singh, DDG (Technical Management), OFB, Dr. S. V. Kamat, Outstanding Scientist, DMRL, DRDO, Shri N. Das, Sr. Scientist, DMRL, DRDO, Dr. J.J.B Prasad, Sr. Director, ODC-OFMK, OFB, Mr. T. Mathew, Jt. Director, SAMC, DRDO Hqr.

Prof. Rohit Goyal (Dean R&C)



Prof. I.K.Bhat, Director MNIT highlighting the achievements of MNIT Jaipur at the DRDO-OFB Meet

welcomed the delegation and briefed them on the purpose of the MNIT-DRDO-OFB Meet. Prof I.K. Bhat (Director MNIT) then presented the achievements and activities of the Institute. While elaborating

on the development of some important facilities of the institute he stressed the need for collaboration and strengthening the tie-ups with the defence research organisations for addressing the national needs in terms of creation of competent human resources besides developing expertise in the area of materials.



DRDO and OFB personnel visiting the Materials Research Center

❖ A group of students of class XI & XII (Math group) of Subodh Public School, Jaipur visited different departments of the institute during their knowledge trip from April 28, 2014 to April 29, 2014. They visited various laboratories and workshops of the institute. This activity was co-ordinated by Prof. Upender Pandel, Dr. Rajendra Kumar Duchaniya, Dr. Sushant Upadhyay, Mrs. Anoj Meena and Mr. Krishna Kumar with the help of faculty members of various departments.

❖ A one-day Interactive Meet was organized on May 01, 2014 with the officials of FICCI and University of Texas, Austin. Mr James K Wance who is currently Programme Manager at the IC² Institute, Global Commercialisation Group at the University of Texas at Austin was present during the meet. FICCI officials however could not be present during the interaction.



Students visiting Mechanical Workshop

The objective of the programme was to discuss joint collaborative activities for enhancing entrepreneurship development skills amongst the students and faculties. MNIT Jaipur has already well-established Entrepreneurship Development Cell (EDC) and this activity was to strengthen the ongoing programmes of EDC.



The programme started with a brief presentation by Prof I.K. Bhat, Director about the Institute. This was followed by the presentation from Prof. Rohit Goyal (Dean R&C) about the various research activities undertaken at MNIT. Prof. Awadesh Bhardwaj then gave a presentation about the various activities undertaken by the Entrepreneur Development Cell (EDC) a MNIT. This was followed by a presentation from Mr James Wance on the topic: "High Impact Technology Commercialization Platforms." There was an interactive session with the students of the

EDC and other students who were involved in various entrepreneurial activities and had interest of bringing their own start-ups.

❖ An invited seminar by SCUBE SCIENTIFIC SOFTWARE SOLUTION (P) Ltd. was organized by the

Materials Research Center on May 06, 2014 on the following chemistry-based software's tools: ChemBioOffice: Chemistry/life sciences desktop suite, Mestrenova: NMR & LC/GC MS data analysis, Gaussian: Quantum computational chemistry, Scrigress: Molecular modelling & docking software.

All the MRC faculty members especially associated with Chemistry, Physics, Electronics and other departments, Ph. D scholars, company officials and staff attended the seminar.

❖ A Training Programme of RIICO Engineers on EC, EIA Studies, NBWL/CGWA Clearance, Consents and other related Issues was organized by **Department of Civil Engineering** from May 08, 2014 to May 09, 2014. Prof. Rohit Goyal was Coordinator, Dr. Urmilla Brighu was Co-Coordinator and Prof. A.B. Gupta was Advisor of the training programme. Forty-one



Participants registering for the training programme

engineers from RIICO took part in the training programme. Twelve lectures of various experts were organized during



Group photograph of participants

the training which included those by Prof. P. Modak, Executive President, EMC, Mumbai, Dr. J.K. Bassin, Scientist & Head, NEERI Zonal Office, New Delhi, Prof. P.P. Bakre, Retd. Professor and ex-chairman SEAC Rajasthan, University of Rajasthan, Dr. P.K. Parchure, Director, CGWB, Jaipur, Mr. A.S. Brar, IFS, Rajasthan Forest Department, Mr. Amit Lunia, Chief Executive, Quality Management Service, Jaipur, Dr. Rakesh Kushwaha, Sr. Hydrogeologist, CGWB, Jaipur, Mr. T.S. Ranawat, Sr. Env. Engineer and Sec. SEAC, Dept. of Environment., Jaipur and Dr. Vijai Singhal, Sr. Env. Engg.,

RSPCB, Jaipur besides faculty members from MNIT Jaipur. The Valedictory session was presided over by Ms. Veenu Gupta, MD, RIICO as Chief Guest. She emphasized the need for continuous updating of knowledge and skills of RIICO engineers and importance of the subject area of environmental clearance and EIA.

❖ A one-day workshop was organised by the **Department of Metallurgical and Materials Engineering on "Promoting Techno-Entrepreneurship"** on May 19, 2014 for faculty members, research scholars and M.Tech students under TEQIP-II program. Total participants were 50. The experts came from different industries of the country. The Conveners of the workshop



were Prof. Ashok Sharma, Prof. Upender Pandel and Prof. Awdesh Bhardwaj and Co-Convener was Dr. Rajendra Kumar Duchaniya.

❖ Dr. Ghanshyam Singh and Prof. K. K. Sharma as Coordinators, organised a one week Short-Term Course on **"Recent Advances in Signal Processing and Communications"** during May 19th - May 23rd 2014, Total participants were

60, out of which 33 participants were from outside MNIT.

Projects / Civil Works / Research Grant Received

❖ **Dr. Sandeep Chaudhary**, Assistant Professor in the Department of Chemistry has been sanctioned a *DST Sponsored research Projects (Young Scientist Award)* entitled *"Exploring non-opioid analgesics from bench-side to bed-side: An efficient, cost-effective, asymmetric synthesis and SAR study of new non-opioid anti-pain lead compound, Conolidine"* by the DST, New Delhi. The duration of project is three years and the sanctioned amount is **Rs. 27,60,000.00**.

❖ **Dr. Sandeep Chaudhary**, Assistant Professor in the Department of Chemistry has been sanctioned a *DST-RFBR Indo-Russian Joint research Projects* entitled *"Exploring Nitrogen-Based Heterocycles from Bench-side to Bed-side: Synthesis, Chemistry, Stereo-Chemical Assignment, Structure-Activity Relationship Studies and Biological Evaluation"* by the DST, New Delhi and Russian Foundation for Basic Research (RFBR), Russian Federation. The duration of project is May, 2014 to April, 2017 and the total sanctioned amount including overhead charges is **~Rs. 66,66,000.00**.

❖ **Dr. Ghanshyam Singh (PI)** and **Dr. Vijay Janyani (Co-PI)**,



Ms. Veenu Gupta, MD, RIICO addressing the participants

Associate Professors in the Department of ECE have been sanctioned a India-Japan cooperative science programme (DST-JSPS joint research project entitled "**Design and Development of Micro-structured Optical Components for Photonic Integrated Circuit (PICs) applications**". The Japanese partner University is KEIO University, Yokohama (Japan). The project is for two years and the total sanctioned amount is Rs. 20.00 lakh only.

❖ **Dr. Sandeep Chaudhary**, Assistant Professor in the Department of Chemistry has been approved a "**Strategic investigation of organo-catalyzed direct arylation of arenes and hetero-arenes via sp^2 C-H bond activation: Application to an efficient synthesis of bioactive heterocycles**" by the CSIR, New Delhi. The duration of project is three years.

with the sufferings of the tribals, to the never ending greed of the corporates and the support of the politicians-it is an endless chain of viciousness.

❖ **Department of Management Studies** organized a guest lecture by Mr. Yogendra Gupta, CEO Archi Global Services, Jaipur on March 3, 2014. The lecture focused on the formulae for success of an individual through knowing one's own interest, goal, identifying one's dream, doing SWOT analysis, increasing one's knowledge and aptitude, putting 100% efforts and positive thinking. It was an enlightening and thought provoking session which dwelled on the success mantra of life.

❖ **Department of Management Studies** held a guest lecture by Dr. Ashu

activities a student has to do during their work and actual score achieved by the students. He gave a score of maximum 70% for academics and rest 30% was divided into innovation sports, self learning through allied activities done by students, social work/ engineering to enhance their personality etc.

❖ **Centre for Energy and Environment** organized an invited talk on "**Experiences with Designing and operating Large Scale Solar Thermal Systems**" by Mr. Deepak Gadhia, Chairman of Gehrlicher Solar India Pvt. Limited, was organized on March 21, 2014. Mr. Gadhia shared his experiences of installing the first commercial scale solar steam cooking system in India

Distinguished Visitors/Expert Lectures in the Departments

❖ **Department of Management Studies** held a guest lecture by Dr. Vimal Bhanot, Ex Professor, BITS Pilani and social worker on February 20, 2014, regarding the effect of globalization on our daily lives, our country and the economy. The lecture highlighted the various positive and negative impacts the progress of mankind and the rapid globalization is having on our surroundings. The talk helped the students understand the profound impact the process of experimentation has been having on the world. Starting

Bharadwaj, a communication expert on March 10, 2014 about Life Skills for professionals. It was a fun filled and learning session enjoyed by all. Her topic for the day was Soft Skills which would help in life. Her session made the students understand about the most relevant parts of the life of a successful manager and how to play effectively all roles of their life.

❖ Prof. S. Rangnekar, Head, Department of Management Studies, IIT Roorkee, gave a lecture on Building Career Score Card for Professionals on March 31, 2014. He made the students make a score card of all the



and gave tips to entrepreneurs in the field of renewable energy.

❖ **Centre for Energy and Environment** organized an invited talk on "**Climate change ; Future Policies and Regulatory Scenarios**" by Mr. Sanjay Sood, IFS, Chief Conservator of Forests, Shimla Forest Circle, on April 20, 2014. He shared the initiatives by Ministry of Environment and Forest for controlling climate change and India's stand in the climate change negotiations at international level.

❖ **Centre for Energy and**



Environment organized an invited talk on **“Advances in lighting technology and future of lighting”** by Mr. Gagan Mehra, Managing Director, ORSAM on April 20, 2014. The talk was attended by faculty members, researchers and students of Centre for Energy and Environment, as well as from civil, mechanical, architecture departments. Mr. Mehra shared the changing face of lighting industry driven by energy efficiency and modularity with aesthetics. Besides semiconductor based LED lighting, he also discusses developments in the field of organic LEDs, lighting controls, dynamic lighting in buildings, and several recent topics of this field. Mr. Gagan Mehra is an alumnus of MNIT, Jaipur.

❖ **Material Research Centre** on May 15, 2014 organised an invited talk on **“Molecular semiconductors and their applications to high performance electronics and photovoltaics”** by Dr Gap Soo



Chang, Department of Physics and Engineering Physics, University of Saskatchewan

❖ **Material Research Centre** on May 16, 2014 organised an invited Talk on **“Laser Compton Scatter MeV. Photons at Light Sources for Nuclear and Allied Sciences”** by Dr. Chary Rangacharyulu, Department of Physics and Engineering Physics, University of Saskatchewan.

Faculty Achievements

❖ Professor Govind Sharan Dangayach, Head Department of Mechanical Engineering has been nominated as member of "Board of Management" of Rajasthan Technical University Kota by the Government of Rajasthan for a term of three years.

Students Activities

❖ A one-day event- **“Cosmos”**

was organized on March 12, 2014 which comprised quiz competition based on general science & astronomy followed by sky gazing event supported by Birla Planetarium. The winners of the quiz competition were awarded with certificates and prizes

❖ April 06, 2014 was another day of achievement in the history of MNIT as official inauguration of Mumbai Alumni Chapter took place in the Mumbai University campus.

The program had a great response from all the Mumbai Alumni. Around 55-60 alumni participated in the inaugural ceremony along with the Director, MNIT, Prof. I.K. Bhat, Coordinator Alumni Affairs Prof. Dilip Sharma, Coordinator Training & Placement Prof. S.L. Soni and coordinating students.

The Alumni appreciated the efforts and initiatives taken by the ALCOM under the guidance of Director and Coordinator, Alumni Affairs. There was a feeling in that the opening of





Alumni Mumbai Chapter will help them in staying connected amongst themselves and with the Institute.

The credit of opening this chapter goes to Sh. Sanjay Khullar, Sh. Ranjeet Shetty, Sh. Hemant KT, Sh. Neerav Parmar, Sh. Rajendra Kalkar, Sh. Ashish Dwivedi and the students Pulkit Singh, Divya Sharma, Gaurav Bansal, Saurabh Devnani and their team for their continuous efforts.

❖ Women's Cell MNIT organized a sensitization workshop on 'Self-Empowerment: Coping with Workplace Harassment' on April, 2014 in collaboration with EduTrain Training & Consulting Services. The facilitators of the workshop were Ms. Hina Mohnot, Psychologist and Mental Health Professional and Dr. Ashish Johri, Training Consultant - EduTrain Training & Consulting Services. A total of 43 PhD scholars attended the workshop. The participants were provided with a Training Kit

which included a Folder with reference material, print-out of Presentation, Feedback Forms, Learning Activities and Exercises. They were also given certificates for participation.

The workshop focused on the issues of sexual harassment at workplace, gender violence and hostile working environment. The Do's and don'ts to tackle the various situations, which

women may come across at their workplaces, were discussed and demonstrated through Role plays. Activities like the 'self reflection sheet', 'self esteem scale' and 'letter to myself' made the session more educative.

❖ A Kishore Kumar musical evening by Mr. Atul Mishra was organized by R&D Office on May 08, 2014 from 6:00 PM onwards at Mini Auditorium, Design Centre. Musical Evening was organized for RIICO Engineers undertaking training programme at MNIT Jaipur. Mr. Atul Mishra entertained the guests with Kishore Kumar songs and was very much liked by those present.



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Note : The information published has been received from the respective departments / sections / faculty.