



Vol -2 Issue -1 (January 2013)

IIT Ropar students won first prize in Infosys Hashers 2012

wo B.Tech. students from the Computer Science and Engineering branch secured first place in the All India level programming contest. The duo, Mr. Abhisaar Sharma and Mr. Abhishek Kumar Arora, were awarded prize money of Rupees One Lakh.



Campus Placement IIT Ropar tops among the new IITs

IT Ropar tops among the eight new IITs in terms of pay packages offered to its students during the campus placement drive this year. Epic Systems (USA) offered Rs.63 lakhs per annum to two of the B.Tech students which is the highest package offered to any student from the newly established IITs. The overall employment scenario through the campus placement is also very good. (more on page 9).

CONTENTS

- Page I : Students Achievements, Placement, Al Competition, Library Awards, First Convocation
- Page 2-3: Sponsored Projects, Consultancy, Publications
- Page 3-5: Conference Proceedings/Papers Presented, Convocation Address, Sessions Chaired, Invited Lectures
- Page 6 Seminars, Visitors
- Page 7 **New Recruits**
- Page 8 Visit Abroad, Hindi Program, Staff Training Program
- Page 9 Design Fair, Placement Report
- Page 10: Inter IIT Sports, Independence Day Celebration, Tree Plantation
- Page II: Diwali, Ganesh Chaturthi, Dussera Celebrations, Robotics
 - Competition
- Page 12: Academic Calendar, Editorial Board, Contacts

CSE Student Excelled in Artificial Intelligence Competition

r. Gaurav Katoch, a final year B.Tech. student, won a three day trip to Japan in a competition organized by Top Career International and sponsored by a Japanese company named Works Application on "Artificial Intelligence Design of an Unknown Card Game" in September 2012. He has also been awarded with a cash prize of Rs. 10,000/-.

Library Awards

he Institute Library won three awards for the highest usage of Electronic Resources among the new IITs. The duration of the usage was from January 2012 to December 2012. The Resources are:

- I. Science Direct Journals (Elsevier B.V.)
- 2. Scopus Database (Elsevier B.V.)
- 3. Nature Journal (Nature Publishing Group)

UPCOMING EVENT First Convocation of IIT Ropar

he First Convocation of IIT Ropar will be on February 2, 2013. Dr. K. Kasturirangan, Member (Science), Planning Commission, Government of India will be delivering the first Convocation Address.







SPONSORED PROJECTS

- C. M. Nagaraja: "Development of novel transition metal complexes with pincer-type ligands for splitting of water" Rs. 19,37,000/- funded by CSIR, Govt. of India, started (2012-2015).
- 2) C. M. Nagaraja: "Development of Chiral metal-organic frameworks for heterogeneous asymmetric catalysis" Rs. 23,11,392.00/- funded by DST, Govt. of India (FAST TRACK PROPOSALs for Young scientists), started (2012-15).
- 3) Debaprasad Mandal: DST Fast Track "Fluorous Approach towards Anion Recognition for overcoming the Hofmeister Bias" Rs. 23 Lakhs (2013-2016).
- 4) Harpreet Singh: Development of Slurry Erosion Resistant Coating for Hydro-turbines, CSIR, New Delhi, Rs. 15.22 Lakhs, (2012-2015).
- 5) Navin Kumar: "Hyper velocity impact induced deformation of the target-projectile system", DRDO, New Delhi, Rs. 35.97 Lakhs.
- 6) Shubhrangshu Dasgupta: "Energy and coherence dynamics in photosynthetic bacteria", DST, Govt. of India, Rs. 10 Lakhs Apprx. (2013-2016).

INDUSTRIAL CONSULTANCY

1) Himanshu Tyagi: Technology Survey for Solar Energy, Dr. Himanshu Tyagi (Co-Consultant), RBS Ltd. Bangalore, (Rs. 3.00 Lakhs)

PUBLICATIONS

Books/Journal Papers:

Anupam Agrawal

- Grewal, H. S., Singh, H., and Agrawal, A. "CFD Modeling for Evaluation of Slurry Erosion of Hydroturbine Materials." International Journal of Advanced Mechatronics and Robotics 3.2 (2012): 61-70.
- Agrawal, A., Ziegert, J., Smith, S., Woody, B., and Cao, J. "Study of Dimensional Repeatability and Fatigue Life for Deformation Machining Bending Mode." Transaction of The ASME: Journal of Manufacturing Science and Engineering 134.6 (2012): 061009.

C. C. Reddy

1) Jain, J. K., Duggal, S., Pathak, A., Chahal, J. S., and **Reddy, C. C.** "High Gain, Low Noise amplifier for pulsed electro-Acoustic method of spacecharge measurements" Journal of ISOI.

Harpreet Singh

- 1) Grewal, H.S., Arora, H.S., Agrawal, A., and Singh, H. "Surface modification of hydroturbine steel using friction stir processing." App. Surf. Sci., 2012.
- 2) Grewal, H.S., **Singh, H.**, and Agrawal, A. "Microstructural and mechanical characterization of Nickel-Alumina thermal sprayed coatings", Surf. Coat. Technol., 2012.
- 3) Arora, H.S., Singh, H., and Dhindaw, B. K. "Corrosion behaviour of a Mg alloy AE42 subjected to friction stir processing." Corrosion NACE, 2012.
- 4) Arora, H.S., Grewal, H.S., Singh, H., and Dhindaw, B. K. "Improving the tribological properties of Mg based AZ3 I alloy using friction stir processing", Advanced Materials Research 585 (2012): 579-583.
- 5) Grewal, H.S., Arora, H.S., Agrawal, A., and Singh, H. "Evaluation and development of economical viable coatings for erosion protection of hydroturbines", Advanced Materials Research 585 (2012): 590-594
- 6) Arora, H.S., Grewal, H.S., Singh, H., and Dhindaw, B. K. "Some investigations on AZ91 alloy subjected to friction stir processing." Transactions of Indian Institute of Metals, (2012).
- 7) Grewal, H.S., Arora, H.S., Agrawal, A., and **Singh, H.** "Cavitation erosion studies on friction stir processed hydroturbine steel." Transactions of Indian Institute of Metals 65.6 (2012): 731-734.
- 8) Kaushal, G., **Singh, H.,** and Prakash., S. "Effect of zirconium addition in hvof-sprayed Ni-20Cr coating." Surface Engineering, (2012).
- 9) Kumar. M., Singh. H., and Singh. N. "Study of Ni-20Cr coatings for high temperature applications-a review." Archives Metall. Mater., (2012).
- 10) Kumar. M., Singh. H., and Singh. N. "Extraction and transport behavior of tripodal receptor: selective recovery of Ni2+ and processing into nickel nanoparticles", Mineral Processing and Extractive Metallurgy, (2012).
- 11) Bala, N., Singh, H., and Prakash, S. "X-Ray Diffraction Study of Cold Sprayed Ni-20Cr and Ni-50Cr Coatings on Boiler." Advanced Materials Research 620 (2012): 257-262.
- 12) Singh, T.P. Singh, H., Singh, H. "Characterization and In-vitro Investigations of Thermal Sprayed HA and HA/TiO2 Coatings on 316L SS." J. Therm. Spray Techno. 21.5 (2012): 917-927.
- 13) Singh, T.P. Singh, H., Singh, H. "Characterization and In-Vitro Corrosion Investigations of Thermal Sprayed Hydroxyapatite and Hydroxyapatite-Titania Coatings on Ti-Alloy." Metall. Mater. Trans. A 43.11 (2012): 4365-4376.

Himanshu Tyagi

1) Khullar, V., **Tyagi, H.,** Phelan, P.E., Otanicar, T.P., Singh, H., & Taylor, R.A., "Solar Energy Harvesting Using Nanofluids-Based Concentrating Solar Collector", ASME Journal of Nanotechnology in Engineering & Medicine, 3 (2012): 0310031-9.

Manoranjan Mishra

- 1) Mishra, M., Thess, A., and De Wit, A. "Influence of a simple magnetic bar on buoyancy-driven fingering of traveling autocatalytic reaction fronts." Physics of Fluids 24 (2012): 124101-13.
- 2) Mishra, M., De Wit, A., and Sahu, K. C. "Double diffusive effects on pressure-driven miscible displacement flows in a channel." Journal of Fluid Mechanics712 (2012): 579-597.

Narinder Singh

- 1) Sharma, S., Narang, K., Singh, N., and Kaur, N. "Imine linked chemosensors coupled with ZnO: Fluorescent and chromogenic detection of Al3+". Materials Letters84 (2012): 104-106.
- 2) Goh. H., Kim, M. J., Saluja, P., Singh, N., and Jang, D. O. "Dipodal fluorescent chemosensor for Cu2+ and resultant complex as a chemosensor for iodide." Tetrahedron Letters 53.10 (2012): 3900-3902.
- 3) Kim, M. J., Kaur, K., **Singh, N.**, and Jang, D. O. "Benzimidazole-based receptor for Zn2+ recognition in a biological system: a chemosensor operated by retarding the excited state proton transfer" Tetrahedron 68.27–28 (2012): 5429-5433.
- 4) Kaur, K., Bhardwaj, V. K., Kaur, N., and **Singh, N.** "Fluorescent chemosensor for Al3+ and resultant complex as a chemosensor for perchlorate anion: First molecular security keypad lock based on Al3+ and ClO4- inputs" Inorganic Chemistry Communications 26 (2012): 31-36.
- 5) Sharma, H., Kaur, N., and Singh, N. "Imine linked 1,8-naphthalimide: Chromogenic recognition of metal ions, density function theory and cytotoxic activity" Inorganica Chimica Acta 391 (2012): 83-87.
- 6) Kaur, K., Kaur, N., and **Singh, N.** "Imine coupled ZnO based fluorescent chemosensor for the simultaneous estimation of Al3+ and Cr3+." Materials Letters80 (2012):78-80.
- 7) Saluja, P., Kaur, N., Singh, N., and Jang, D. O. "Benzimidazole-based fluorescent sensors for Cr3+ and their resultant complexes for sensing and F-." Tetrahedron 68.41 (2012):8551-8556.





8) Bhardwaj, V. K., Saluja, P., Hundal, G., Hundal, M. S., **Singh, N.,** and Jang, D. O. "Benzthiazole-Based Multifunctional Chemosensor: Fluorescent Recognition of Fe3+and Chromogenic Recognition of HSO4-." Tetrahedron (2012).

Rajendra Srivastava

- 1) Kaur, B., Prathap, M. U. A., and **Srivastava, R.** "Synthesis of transition metal exchanged nanocrystalline ZSM-5 and their application in electrochemical oxidation of glucose and methanol." ChemPlusChem 77 (2012): 1119-1127.
- 2) Kore, R., and **Srivastava**, **R.** "Synthesis of zeolite Beta, MFI, and MTW using imidazole, piperidine, and pyridine based quaternary ammonium salts as structure directing agents" RSC Advances 2 (2012): 10072–10084.
- 3) Kore, R., and **Srivastava, R.** "Influence of –SO3H functionalization (N-SO3H or N-R-SO3H, where R = alkyl/benzyl) on the activity of Brönsted acidic ionic liquids in the hydration reaction" Tetrahedron Letters 53 (2012): 3245–3249.
- 4) Kore, R., Kumar, T. J. D., and **Srivastava**, **R.** "Hydration of alkynes using Brönsted acidic ionic liquids in the absence of Nobel metal catalyst/H2SO4." Journal of Molecular Catalysis A: Chemical 360 (2012): 61–70.
- 5) Prathap, M. U. A., Kaur, B., and **Srivastava, R.** "Direct synthesis of metal Oxide incorporated mesoporous SBA-15 and their applications in non-enzymatic sensing of glucose." Journal Colloid and Interface Science 370 (2012): 144–154.
- 6) Kore, R., Tumma, M., and Srivastava, R. "Syntheses and catalytic activities of homogenous and hierarchical ZSM-5 grafted Pd(II) dicarbene complex of imidazole based ionic liquids." Catalysis Today 198 (2012): 189–196.

Rajyashree Khushu-Lahiri

1) Garg, S., and Khushu-Lahiri, R. "Interpreting a Culinary Montage: Food in JhumpaLahiri's interpreter of Maladies." Asiatic: IIUM Journal of English Language and Literature 6.1 (2012):73-83.

Ranian Das

- Das, R. "Application of genetic algorithm for unknown parameter estimations in cylindrical fin." Applied Soft Computing 12.11 (2012): 3369-3378.
- 2) Das, R. "Inverse analysis of Navier-Stokes equations using simplex search method" Inverse Problems in Science & Engineering 20.4, (2012): 445-462.

Rano Ringo

1) Ringo, R. "Arvind Adiga's The White Tiger: An Insight into the Facets of a Globalized India." Critical Practice. 19 (2012): 102-115.

Rohit Y. Sharma

1) Sharma, R.Y., Chakravarty, T., and Choi, K. "Fast and Efficient Extraction Algorithm for High-Speed Interconnects with Arbitrary Boundaries." Journal of Supercomputing 62.1 (2012): 251-264.

Somdev Kar

1) Kar, S. "Voicing agreement in Bangla word-medial clusters." Indian Linguistics 73.1-4 (2012).

Subash Chandra Martha

- 1) Chakrabarti, A., and Martha, S. C. "Methods of Solution of Singular Integral Equations." Mathematical Sciences 6.15 (2012).
- Panda, S., Samantaray, S. S., and Martha, S. C. "Wave Scattering by Small Undulation on the Porous Bottom of an Ocean in the Presence of Surface Tension." ISRN Oceanography 2013 (2012), Article ID 504879.

Subhendu Sarkar

1) Dhillon, P. K., Sarkar, S., Franquet, A., Moussa, A., and Vandervorst, W. "Si nanoripples: A growth dynamical study." Appl. Surf. Sci. 258, (2012):9579.

CONFERENCE PROCEEDINGS/PAPERS PRESENTED

Anshu DharJayal

1) Anand, A., Yadav, A. K. S., and Jayal, A. D., "Influence of Cutting Tool Flank Surface Texture in Dry Metal Machining," Proceedings of the International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering, Punjab Technical University, Kapurthala, India, October 5-7, 2012, pp. 661-666.

Anupam Agrawal

- 1) Grewal, H. S., Singh, H., **Agrawal, A.,** and Arora, H. S. "Friction Stir Processing of Mild Steel to Enhance its Surface Hardness", International conference on X-Rays and Related Techniques in Research and Industry (ICXRI 2012), Organized by School of materials and Minerals Resources Engineering, UniversitiSains Malaysia, Malaysia, 3-5th July, 2012.
- 2) Grewal, H. S., Singh, H., Agrawal, A., and Arora, H. S. "Evaluation and Development of Economically viable coatings for Erosion Protection of Hydroturbines", International Conference on Advances in Materials and Processing challenges and opportunities (AMPCO 2012), Organized by Department of Metallurgical and Materials Engineering, Indian Institute of Technology Roorkee, Roorkee, 2–4 November 2012.
- 3) Grewal, H. S., Singh, H., and **Agrawal, A.**, "Development of New Mathematical Model for Slurry Erosion Prediction", Third Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), Organized by Department of Applied Mechanics, IIT Delhi, 5-12 December 2012.

Arvind Kumar Gupta

1) Gupta, A. K., "Modeling of Vehicular Traffic Flow on Highway Interchange using Section Approach." Paper presented at the "International Conference on Engineering and Applied Sciences (ICEAS-12)" during 24th -27th July 2012 in Beijing, China.

C. C. Reddy

- 1) Reddy, C. C. "Condction and Space Charges in Polymeric Dielectrics and Nanocomposites" IEEE ICIIS, Paper No. 401, 2012.
- 2) Reddy, C. C. "On the thermal breakdown of AC cables and transformer bushings." Properties and Applications of Dielectric Materials (ICPADM), IEEE 10th International Conference, 24-28 July 2012.
- 3) Chahal, J. S., and **Reddy, C. C.** "Simulation of pulsed electro acoustic method of space charge measurement." Properties and Applications of Dielectric Materials (ICPADM), IEEE 10th International Conference, 24-28 July 2012.
- 4) Reddy, C. C. "Effect of diffusion on space charge formation in dielectrics under steady-state DC conditions." Properties and Applications of Dielectric Materials (ICPADM), IEEE 10th International Conference, 24-28 July 2012.
- 5) Dan, B., Anurag, D., Vikas, L., Chahal, J. S., and **Reddy, C. C.** "On the Design of Sensitive Measuring Instrument for Leakage Current Measurement in Dielectrics." National Symposium on Instrumentation (NSI 37), Paper PB-2.32, October 30-November 1, Chandigarh, India.
- 6) Jain, J. K., Duggal, S., Pathak, A., Chahal, J. S., and **Reddy, C. C.** "High Gain, Low Noise Amplifier for Pulsed Electro-Acoustic Method of Space Charge Measurements." National Symposium on Instrumentation (NSI 37), Paper PB-2.18, October 30-November 1, Chandigarh, India.

Harpreet Singh

 Arora, H. S., Singh, H., Grewal, H.S., and Dhindaw, B. K., "3-Dimensional transient heat modeling and simulation of strain fields during friction stir processing." Proc. Third Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), organized by Department of Mechanical Engineering, Indian Institute of Technology Delhi, December 5-8, 2012.





- Grewal, H. S., Arora, H. S., Agrawal, A., and Singh, H., "Development of novel mathematical model for slurry erosion prediction." Proc. Third Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), organized by Department of Mechanical Engineering, Indian Institute of Technology Delhi, December 5-8, 2012.
- 3) Kumar, M., Singh, H., and **Singh, N.**, "Study of air oxidation behavior of Ni-20Cr alloy powder coatings on T22 boiler steel." Proc. 'International Conference on Corrosion in Infrastructure & Chemical Industries (CICI-2012)', December 06-08, held at ITM Universe, Vadodara (Gujrat), India.
- 4) Joshi, R. S., **Singh, H.,** "Modulation Assisted Machining: A Way Out for Particulate Production." 4th International and 25th National All India Machine Tool Design and Research (AIMTDR 2012), December 14-16, held at Jadavpur University Kolkata, India.
- 5) Kaushal, G., Kaur, N., Singh, H., and Prakash., S. "Comparative High Temperature Corrosion Behaviour of Ni-20Cr Coatings deposited by Various Thermal Spraying Techniques" International Conference Corrosion in Infrastructure & Chemical Industries, CICI-2012, 6-8 Dec, ITM Universe Vadodara, India.
- 6) Bala, N., Singh, H., and Prakash, S., "X-Ray Diffraction Study of Cold Sprayed Ni-20Cr and Ni-50Cr Coatings." International Conference on X-Rays & Related Techniques in Research & Industry 2012 (ICXRI 2012) held at Penang, 2012 Malaysia from July 3-5.

Himanshu Tyagi

- 1) Vishwakarma, V., Singhal, N., Khullar, V., **Tyagi, H.,** Taylor, R. A., Otanicar, T. P., and Jain, A. "Space Cooling Using the Concept of Nanofluids-Based Direct Absorption Solar Collectors." Paper No. IMECE2012-87726, ASME International Mechanical Engineering Congress and Exposition, Houston, Texas, USA, November 9-15, 2012.
- 2) **Tyagi, H.**"Plasmonics Instrumentation A New Era for the Cancer Therapeutics", National Symposium on Instrumentation (NSI-37), CSIO, Chandigarh, India, Oct. 30 Nov. 01, 2012.
- 3) **Tyagi, H.**"Optical Coefficients of Gold Nanorod Embedded Tissue Variant Parameters", Photonics 2012 International Conference on Fiber Optics and Photonics, IIT Madras, Chennai, India, Dec. 9-12, 2012.

Jitendra Prasad

1) Tiwari, A. K., and **Prasad, J.** "Investigating the Role of Shear Strain in Bone Adaptation." International Conference on Design of Biomaterials (BIND-12), December 9-11, 2012, Indian Institute of Science (IISc), Bangalore.

Kamal Kumar Choudhary

1) Carl, M., Bhattacharya, P., and Choudhary, K. K. (eds.). "Proceedings of First workshop on Eye-tracking and Natural Language Processing" Published by The COLING 2012: Mumbai, 2012.

Manoranjan Mishra

- 1) Pramanik, S., and Mishra, M. "Effects of Korteweg stresses on the viscous fingering of a miscible slice in porous media." 57th congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2012), December 17-20, Pune, India.
- 2) **Mishra, M.,** Wit, A. D., and Sahu, K. C. "Double Diffusive effects between two miscible fluid flows in a channel." Bulletin of the American Physical Society, 57.17, 65th Annual Meeting of APS Division of Fluid Dynamics (DFD 2012), San Diego, California USA.
- 3) Pramanik, S., Kulukuru, G. L., and **Mishra, M.** "Miscible Viscous Fingering: Application in Chromatographic Columns and Aquifers." COMSOL conference, 2012, November I-2, Bangalore, India. (Awarded the 'Best academic paper Runner-Up').
- 4) Pramanik, S., and **Mishra, M.** "Stability of miscible displacement in porous media: Effect of Korteweg stress", EUROMECH Fluid Mechanics Conference (EFMC9), 2012, September 9-13, Rome, Italy.
- 5) Rana, C., Mishra, M., Wit, A. D. and Martin, M. "Dispersion in chromatographic columns with non-isoeluotropic." EUROMECH Fluid Mechanics Conference(EFMC9), 2012 September 9-13, Rome, Italy.
- 6) Sahu, K. C., Wit, A. D., and **Mishra, M.** "Double diffusivity on miscible fluid flow in a channel." 23rdInternational Congress of Theoretical and Applied Mechanics (ICTAM2012), 2012 August 19-24, Beijing, China.

Navin Kumar

- 1) Saini, K., and Kumar, N., "Intrinsic Compressibility and Volume Compression in Collagen Proteins by Molecular Dynamics Simulation at High Pressures", International Conference on Design of Biomaterials (BIND-12), 09-11th Dec., 2012, IISc Bangalore, Bangalore, India.
- Saini, K., and Kumar, N., "Effect of Crack Position and Orientation on the Mechanical Characteristics of Gold Nano-Wires under Torsional Loading", ASME-2012 International Mechanical Engineering Congress & Exposition (IMECE), 09-15 Nov., 2012 Houston, TX, USA.

Rajyashree Khushu-Lahiri

1) Khushu-Lahiri, R., and Chakravarty, U. "Transforming Language Learning: A Study of Social Networks and Language Learning" published in the Conference Proceedings on Interfacing Language, Culture and Technology.

Ramjee Repaka

- 1) Bhowmik, A., **Repaka, R.** and Mishra. S. C. "Ultra-short Pulse Laser: A Potential Tool for Breast Cancer Detection", The 9th International Conference on Flow Dynamics ICFD 2012, 19-21 September 2012, Sendai, Japan.
- 2) Bhowmik, A., **Repaka, R.** and Mishra. S. C. "Short-pulse Laser Transport in Biological Tissue with and without Malignant Lesion", 2nd International Conference on Biomedical Engineering and Assistive Technologies, 6-7 December 2012, Jalandhar, India.

Rano Ringo

1) Ringo, R."RabindraNath Tagore's Treatment of Childhood in his Plays DaakGhar and Achalatayan." Presented at IJAS International Conference for Academic Disciplines. Held at Ryerson University, Toronto across 21-24 May 2012.

Rohit Y. Sharma

1) Sharma, R.Y., Uzunlar, E., Kumar, V., Bashirullah, R., Naeemi, A., and Kohl, P. "Design and Fabrication of Air-clad TSVs in Silicon Interposer." Proceedings of the TechCon Conference, Austin, USA, 2012, pp. 1-4.

Subash Chandra Martha

- 1) Panda, S., and Martha, S. C. "Oblique wave scattering by small undulation of the porous bottom in a two-layer fluid." Proceedings of 57th Congress of The Indian Society of Theoretical and Applied Mechanics (ISTAM), Defence Institute of Advanced Technology, Pune, India, December 17-20, 2012, pages 235-242.
- 2) Martha, S. C. "Water-wave diffraction by small undulation on a porous ocean-bed in the presence of surface tension in a two-layer fluid", 65th Annual Meeting of the American Physical Society (APS) Division of Fluid Dynamics, San Diego, California, USA, November 18-20, 2012.

T. J. Dhilip Kumar

1) Samolia, M and Kumar, T. J. D. "A first-principles study of hydrogen interaction and saturation on MAI3" Paper No. 66, Theoretical Chemistry Symposium (TCS-2012), held at IIT Guwahati, India, December 19-22, 2012.

Harpreet Kaur

1) Kaur, H. "Adoption of ICT in Academic Library System", National Seminar on Information and Communication Technology Applications in Library Services, 13th August, 2012, Divisional Library (South), Sector-34, Chandigarh.





2) Kaur, H. "Academic Plagiarism: An Indian Scenario", Conference on Challenges for Education in Knowledge Society by All India Association of Educational Research (AIAER),17-19 Nov. 2012, at RayatBahra College of Education, Mohali.

Tarvinder Singh Handa

1) Handa, T.S. "Making Library Patrons Become Habitual Users: an approach by libraries using conventional methods and electronic media." One Day International Seminar on Reading Habits in the Internet Era, Department of Library and Information Science, Punjabi University, Patiala, India, 06th November, 2012.

CONVOCATION ADDRESS

1) Prof. M. K. Surappa, Director, IIT Ropar delivered the 8th Convocation Address at Shaheed Udham Singh College of Engineering & Technology, Tangori, Punjab on 10.11.2012.

CHIEF GUEST

1) Prof. M. K. Surappa, Director was the Chief Guest in the 10th Convocation of Punjab Technical University, Jalandhar on 15.10.2012.

2) Prof. M. K. Surappa, Director was the Chief Guest at the Orientation Programme at B. T. Lakshman Institute of Technology & Management, Bangalore on 07.09.2012.

SESSIONS CHAIRED

Arvind Kumar Gupta

1) Chaired a session in International conference on engineering and applied sciences (ICEAS-12) during 24th -27th July 2012 at Beijing China.

Harpreet Singh

- Chaired a session on Hot Corrosion and delivered an invited talk titled "Comparative High Temperature Corrosion Behaviour of Ni-20Cr Coatings deposited by Various Thermal Spraying Techniques" during International Conference Corrosion in Infrastructure & Chemical Industries, CICI-2012, 6-8 Dec, ITM Universe Vadodara, India.
- 2) Chaired a session during International Conference on "Advancements & Futuristic Trends in Mechanical & Materials Engineering" during October 5-7, 2012 held at Punjab Technical University, Jalandhar India on October 7, 2012.

Manoranjan Mishra

 Chaired the technical session "FM8: Flow Through Porous Media" at "57th congress of IndianSociety of Theoretical and Applied Mechanics (ISTAM 2012)", December 17-20, Pune, India.

Rajyashree Khushu-Lahiri

1) Chaired a Plenary Session and presented a paper in an International conference on Interfacing Language, Culture and Technology held in BITS Pilani, October 8-9, 2012.

Ramiee Repaka

1) Chaired a technical sessions of the 9th International Conference on Flow Dynamics ICFD 2012, held during 19-21 September 2012, Sendai, Japan.

INVITED LECTURES

M. K. Surappa

1) Delivered a talk at the Young Investigators Meeting in Berlin, Germany on 14.09.2012.

Anshu DharJayal

1) "Sustainable Micromanufacturing" at the Short Term School on Micromanufacturing, IIT Kanpur, 05 – 10 Nov, 2012.

Arvind Kumar Gupta

1) "Continuum approach to non-lane-based traffic flow" Beijing University of Aeronautics & Astronautics, Beihang University China on 27/07/2012.

Ć. C. Reddy

1) Keynote address titled "Space Charge Limited Fields in Electrical Insulation" at 1st International Conference on advancements in Engineering and Technology (ICAET-2012), 12th and 13th October, 2012, Patiala, India.

Harpreet Singh

1) "Slurry Erosion in Hydroturbines and its Protection" during Punjab Technical University sponsored Symposium on "Recent Advances in Emerging Surface Engineering Practices" at RIMT College of Engineering and Technology, MandiGobindgarh, Punjab, India on July 20, 2012.

Himanshu Tyagi

1) "Role of Nanotechnology in Harnessing Renewable Energy" at RBCEBTW College, as part of Faculty Development Program on 'Emerging Trends in Nanoscience and Technology' sponsored by PTU (Punjab Technical University), India, July 2012.

Krishnamachar Sreenivasan

1) "A framework for analyzing performance of Cloud Computing systems" at US-India Research Forum, Coimbatore, August 2012.

Madeti Prabhakar

1) "Method of Unknotting Torus Knots and Links" in the Knot Theory and its Ramifications, a mini symposium in the 6ECM conference held from 1 July to 6 July 2012 at the Krakow, Poland.

Manju Khan

"Unit group of group algebra" in the conference "Group and their Actions", 9th July, 2012 - 13th July 2012, Bedlewo, Poland.

Manoranjan Mishra

1) "Mathematical Modeling of a Hydrodynamical Instability in a porous media"at the "Seminar in commemoration of the concluding day of the Indian Year of Mathematics" on December 21, 2012, Berhampur University, Odisha.

Rohit Y. Sharma

1) "Design and Fabrication of Air-clad Interconnects" at Semiconductor Labs, ISRO, Mohali. (September 2012).

Subash Chandra Martha

- "Mathematical Modelling on Very large Floating Structures" in the UGC sponsored National Seminar in Mathematics (Impact of ICT on Socio-Economic Development of Rural India) held at P.G. Department of Mathematics, Gaya College, Gaya, India during September 22-23, 2012.
- 2) "Integral Equation Method applied to Boundary Value Problems" in the International Conference on Analysis and Applications" held at Berhampur University, Berhampur, India during July 20-21, 2012.

Shubhrangshu Dasgupta

1) "Highly efficient quantum-dot biexciton control for entangled photon generation", in 3rd DAE-BRNS Biennial Symposium on Atomic, Molecular, and Optical Physics at Indian Institute of Science Education and Research (IISER), Kolkata during 14-17 December, 2012.

T. J. Dhilip Kumar

1) "Low energy rotational inelastic collisions of H+ + CO system" presented in the Theoretical Chemistry Symposium (TCS-2012) at IIT Guwahati, India, December 19-22, 2012.



SEMINARS @ IIT ROPAR

Department of Chemistry:

- 1) Dr. Ashok Kumar Patel, Department of Biophysics, John Hopkins University, Baltimore, USA: "Understanding Structure of Pyruvate Kinase for an Effective Drug for Cancers" on 01.11.2012.
- 2) Dr. Ananya Debnath, Max Planck Institute for Polymer Research, Mainz, Germany: "Multiscale Modeling of Processes involving Biological Macro and Long Chain Molecules" on 03.10.2012.
- 3) Dr. V. Ramanathan, Department of Physics, University of Stuttgart, Germany: "Towards Label-free Tumour Diagnostics using Raman Microspectroscopy: Identification of Nucleic Acid Markers" on 24.09.2012.
- 4) Dr. Sudip Chakraborty, Colorado State University, Colorado, USA: "Molecular Modeling and Simulation of Complex Systems: From Biology to Materials" on 12.09.2012.
- 5) Prof. P. K. Das, Dept. of Inorganic Physical Chemistry, IISc Bangalore, India: "Optimization of Dipolar Interaction in a Large Molecule for Giant Second Harmonic Response" on 31.08.2012.
- 6) Dr. Mily Bhattacharya, DST Women Scientist, IISER Mohali, India: "Conformational Excursions of Proteins Heading to Nanoscale Amyloid Assembly" on 08.08.2012.
- 7) Dr. Venkatakrishnan, P., University of Alberta, Edmonton, Canada: "Functional Organics via Covalent and Non-Covalent Approaches" on 01.08.2012.
- 8) Dr. S. R. C. Vivekchand (Northwestern University, Illinois, USA) Title: "Adventures with Nanomaterials and Surface Plasmons" on 09.07.2012.

Department of Computer Science and Engineering:

- 1) Dr. Vivek Mishra: "Simulation Based Methods for Optimization" on 01.10.2012.
- Dr. Balwinder Sodhi: "Contemporary Computing Platforms": A Software Architecture Perspective" on 16.10.2012.

Department of Humanities and Social Sciences:

1) Prof. B. N. Patnaik, Former Professor, IIT Kanpur: "Arjuna's Problem and its Resolution in Two Mahabharatas" on 03.10.2012.

Department of Mathematics:

- 1) Dr. A S Vasudeva Murthy, Professor, TIFR Centre for Applicable Mathematics: "On the String Equation of Narasimha" on 18.09.2012.
- Dr. Mahender Singh, Inspire Faculty, IISER Mohali: "Free Rank of Symmetry of Manifolds" on 01.10.2012.

Department of Physics:

1) Dr. Md. Manirul Ali, Postdoctoral Fellow, Research Center for Applied Sciences, Academia Sinica, Taiwan: "Quantum-Bit Engineering and some Novel Quantum Phenomena" on 03.08.2012.



Prof. B. N. Patnaik delivering his talk at IIT Ropar

- 2) Dr. Amitava Moitra, Postdoctoral Research Scholar, Department of Chemical Engineering, The Pennsylvania State University: "Magnesium Alloy Design: A Perspective on Multi-scale Modelling" on 30.08.2012.
- 3) Dr. Harsha Raichur, Post-Doctoral Fellow, Raman Research Institute, Bangalore: "What can we Learn from Neutron Star X-Ray Binaries?" on 05.10.2012.
- 4) Dr. Amar Nath Gupta, NINT, University of Alberta, Edmonton: "Direct Observation of Protein Folding/Misfolding using Single-Molecule Force Spectroscopy" on 16.11.2012.

School of Mechanical, Materials and Energy Engineering:

- 1) Dr. Dhiraj Mahajan, Post Doctoral Research Associate, Interdisciplinary Centre for Advanced Materials Simulation (ICAMS), Ruhr University Bochum, Germany: "Multiscale Modeling of Polymeric and Metallic Materials based on Molecular Dynamics" on 01.11.2012.
- 2) Dr. Prodyut Chakraborty, Post-Doctoral Fellow (DAAD Fellowship), Institute for Material Physics in Space, German Aerospace Center (DLR), Köln, Germany: "Evolution of Dendritic Morphology during Coarsening of Mushy Zone" on 06.11.2012.
- 3) Dr. Robert Taylor, Lecturer, School of Mechanical & Manufacturing Engineering, University of New South Wales, Australia: "Recent Trends in Solar Thermal Energy" on 07.11.2012.
- 4) Prof. Sarit K. Das, Professor, Department of Mechanical Engineering, IIT Madras, India: "Thermal Ablation of Tumor using Nanoparticle assisted LASER Irradiation" on 24.12.2012.



Dr. Taylor with one of the doctoral students of IIT Ropar

VISITORS

- Dr. Harinder Singh Khangura, Department of Computer Science, Simon Fraser University, Canada.
- Dr. Vivek Mishra, Department of Computer Science and Automation, IISC Bangalore.
- 3) Dr. Balwinder Sodhi, Department of Computer Science, IIT Kanpur.
- 4) Dr. Robert Taylor, Lecturer, University of New South Wales, Australia.



NEW RECRUITS (JULY TO DECEMBER 2012) FACULTY

SL	Name	Designation	PhD	Joining	Department
1.	Prof. K. Sreenivasan	Visiting Faculty	University of	August 2012	Computer Science & Engineering
			Pennsylvania, USA		
2.	Dr. Rohit Y Sharma	Assistant Professor	Jaypee University of	September 2012	Electrical Engineering
			Information Technology		
3.	Dr. Nagaraja Mallaiah	Assistant Professor	IISc, Bangalore	September 2012	Chemistry
4.	Dr. Sudarshan Iyengar	Visiting Scientist	IISc, Bangalore	October 2012	Computer Science & Engineering
5.	Dr. C. N. Tharamani	Assistant Professor	Bangalore University	October 2012	Chemistry
6.	Dr. Ranjan Das	Assistant Professor	IIT Guwahati	November 2012	School of Mechanical, Materials
					& Energy Engineering
7.	Dr. Samaresh Bardhan	Assistant Professor	Jadavpur University	November 2012	Humanities & Social Sciences
8.	Dr. Yashveer Singh	Assistant Professor	University of Allahabad	December 2012	Chemistry
9.	Dr. Rajib K. Jha	Assistant Professor	IIT Kharagpur	December 2012	Electrical Engineering











Prof. K. Sreenivasan

Dr. Rohit Y Sharma

Dr. Nagaraja Mallaiah Dr. Sudarshan Iyengar Dr. C. N. Tharamani







Dr. Samaresh Bardhan



Dr. Yashveer Singh



Dr. Rajib K. Jha

NON-TEACHING STAFF

SL	NAME	DESIGNATION	JOINING	DEPARTMENT/SECTION
I.	Sh. Ajeet Pal Singh	Sports Officer	November 2012	Sports
2.	Sh. Vijay Singh	Jr. Accounts Officer	September 2012	Accounts



Sh. Ajeet Pal Singh



Sh. Vijay Singh



VISITS ABROAD

- 1) Prof. M. K. Surappa, Director visited University of Bochum, Germany and delivered a talk on 17.09.2012 and participated in the Administrator Enrichment Programme at RWTH Aachen University, Germany during 17.09.2012 to 20.09.2012.
- 2) Prof. M. K. Surappa, Director visited Imperial College London (UK) with Dr. Yogesh Chawla, Director, PGIMER, Chandigarh during 28.10.2012 to 02.11.2012.
- 3) Dr. Narinder Singh and Dr. Rajendra Srivastava visited Faculty of Chemistry, National Autonomous University of Mexico (UNAM) under the DST Indo-Mexican joint research project during 21st 30th July 2012.

HINDI PAKHWADA

IT Ropar celebrated the 'Hindi Fortnight' from 14 September 2012 to 28 September 2012 with great zeal and enthusiasm. During the fortnight, various activities aimed at promoting Hindi were arranged amongst the students and the staff of the institute. Various competitions such as Essay Writing, Debate, Noting & Drafting, Hindi Typing, Extempore, Phrase writing, Hindi Reading, Spelling, Crossword were organized for the students and the staff of the Institute.

The famous scientoonist and CDRI, Lucknow, Mr. Pradeep Kumar Srivastava was the chief guest for the occasion. He inaugurated the fortnightly event "Hindi Pakhwada" in presence of the Registrar, IIT Ropar, Mr. A. Palanivel. A common Open House lecture was organized for the staff and the students during the opening ceremony.

Individual prizes and certificates for competitions organized during "Hindi Pakhwada" were awarded to the winners during the closing ceremony. The Registrar, Mr. A. Palanivel; faculty members, Dr. Rajendra Srivastava and Dr.Arvind Kumar Gupta; Dy. Registrar, Mr.Ravindra Kumar and Asstt. Registrar, Mr.Lagvish Kumar addressed the audience present and highlighted the importance and need of Hindi as the Official Language of the Nation. It was appealed to the officers and employees of IIT Ropar to do more and more jobs in Hindi.

The events were designed, planned and conducted by the Hindi Cell of the institute. The programme was a great success and was highly appreciated by the student community and also by the staff and faculty members. Media, too, was invited and the events were given excellent coverage with due appreciation.



STAFF TRAINING PROGRAMME

here were a series of training sessions arranged for the non-teaching staff of IIT Ropar in the month of September 2012. Mr. Nanak Chand, Deputy Registrar, IIT Delhi and Mr. U.V. Jayendra, Account Officer, IIT Delhi had several interactive sessions with the staff and discussed on some areas including stores, purchase and student Affairs.

A two-day long training took place in the second week of September where Mr. T.S. Vishwanath, Assistant Registrar (Academics), IISc., Bangalore and Mr. P. Manivannan, Accounts Officer, IISc., Bangalore discussed various issues related to establishment, income tax and project accounts.

The highlight of the third event of the same nature was e-tendering, where Mr. K. Bhattacharya, Assistant Registrar (Store & Purchase), IIT Delhi shared some useful knowledge and administrative steps related to the topic.

The staff members of the institute were immensely benefited from this training programme.





DESIGN FAIR AND INDUSTRY INTERNSHIP POSTER PRESENTATION

he School of Mechanical, Materials and Energy Engineering (SMMEE) at the Indian Institute of Technology, Ropar organized a design fair and Industry Internship poster presentations on 5 November 2012. The Director, IIT Ropar, Prof. M.K. Surappa inaugurated the design fair and Industry Internship poster presentations. Prof. Surappa enlightened the students about the challenges that exist for the nation in terms of innovative product design, and mentioned India's need for inventions. He also encouraged the students to develop products, which are valuable to the society.

Students from all branches of first year displayed their products designed in the 'Product design and realization l'(guided by Dr. Prabir Sarkar) course. Some of the innovative products that were displayed in the design fair were laser leveler for civil engineers and architects (can also be used during construction of buildings), energy generation through water recycling in tall buildings, portable low cost cloth dryer (to be used during a rainy season), semi-automatic jalebimaker, manual power wood cutter,





electric number lock, industrial waste water purification device, solar water heater, device to increase gas efficiency (that can save 30% of gas consumption), and disposable syringe crusher to be used during mass vaccination. Dr. Sarkar informed that patents would be filed for many of these products.

Final year Mechanical Engineering students displayed their posters based on their industry internship projects (coordinated by Dr. Anupam Agrawal). These projects were carried out at various organizations and institutes, such as, Aston University, AIP Ltd, BHEL, COMSOL, DRDO, TBRL, and TERI. Faculty and staff members of the Institute, including Prof. Raina (Dean Academics and Research), Dr. Himanshu Tyagi, Dr. Navin Kumar, Dr. Ramjee Repaka, Dr. Ekta Singla, Dr. Jitendra Prasad Mr. Ravinder, students of the Institute and senior students from Sutlej public school, Ropar, attended this event. Dr. Harpreet Singh, coordinator SMMEE, found the products and the posters displayed very impressive and informative. School of Mechanical, Materials and Energy Engineering (SMMEE) is actively looking for industrial partners to take some of the products to the market and also for industrial collaboration to solve various challenges faced by the industries.

IIT ROPAR PLACEMENT REPORT 2012-13

he Placement Season of the second year batch of IIT Ropar has been very encouraging so far. The companies that have participated so far in the Placement 2012 include mostly private ones such as: EPIC, EBay/PayPal, MICROSOFT INDIA, Cognizant Technology Solutions, Larsen & Toubro Limited, Flipkart, CISCO, Navyug Infosolutions Pvt. Ltd, Nucleus Software, SAMSUNG INDIA ELECTRONICS, Impetus, INFOSYS, SCA Technologies, Ericsson India, Texas Instruments, SCA Technologies & OCEANEERING and Infosys. The response from the industry has been overwhelming, with various companies competing in the process and making 56 offers to students so far. Some of the new companies on the campus were, TCS, L&T, Google and Cognizant.

One happy addition has been the Indian Navy. They had shortlisted some students for the recruitment process.

The average salaries until now are Rs. 14 Lakhs per annum for CSE, Rs. 9.33 Lakhs per annum for EE and Rs. 5.90 Lakhs per annum for SMMEE. The highest package offered abroad was for US\$ 104,848.12 per annum by the US based company Epic systems. The highest package offered in India is Rs.17.45 Lakhs per annum by Ebay Paypal.



48th INTER IIT SPORTS MEET

he 48th Inter IIT Students Sports Meet was held at IIT Roorkee from 17 Dec to 24 Dec 2012. A contingent of about 90 students (both boys and girls) was led by Dr. HimanshuTyagi (Faculty Advisor, Sports) and Mr.Ajeet Pal Singh (Sports Officer) from IIT Ropar to participate in this meet.

The students of IIT Ropar participated in Athletics, Badminton, Basketball, Cricket, Football, Table Tennis, Tennis, Volleyball and Weight Lifting. For the first time the boys' team of IIT Ropar reached the quarter finals of Table Tennis and Tennis.

Following the students' events, IIT Roorkee also hosted the 20th Inter IIT Staff Sports Meet in which the staff of IIT Ropar participated in Athletics, Badminton and Table Tennis. IIT Ropar ladies badminton team beat IIT Madras in their pool match. Mr. Ram Kumar (Junior Attendant, SMMEE) won the bronze medal in the hammerthrow event.





INDEPENDENCE DAY

The Independence day was marked by the unfurling of the National flag by Prof. Sanjoy Roy, Acting Director, in presence of the students, faculty and staff. It was followed by cultural programmes performed by some students.



TREE PLANTATION

Environment is one of the top priorities of IIT Ropar fraternity. A tree plantation campaign took place on August 22, 2012. Saplings were planted inside the campus by Prof. Surappa, Director of the Institute along with Prof. Sathyamurthy, Director, IISER Mohali, Prof. Munjal, Hon. Professor, IISc., Bangalore and others.







DIWALI CELEBRATION

he students celebrated Diwali on campus with gaiety. A beautiful show of crackers and fireworks on the cricket ground was the main attraction this year. The festival of light was marked by competitions of photography and drawing arranged by the students. The faculty and staff of the institute also joined the students in the celebration.

DUSSERA

special performance of Dandia by the students of the institute was the key attraction of the Dussera festival this year. Faculty and staff along with their family members shared the joy of celebration with the students. The beautiful decoration of the hostels with light made the whole experience much more enjoyable.



ROBOTICS COMPETITION

obotics Club, IIT Ropar organized Wayfarer, the Intrainstitute Robotics Competition on the 14th of October, 2012. The contest saw students coming together in groups to participate with great zeal. The bots were designed and made by the students and showed a great potential in advanced engineering.

GANESH CHATURTHI



anesh Chaturthi is one of the most popular festivals in India. This year the festival was spread across 19 September to 23 September. It was a 5 day event starting with Pran-Pratishtha of Ganesha Idol at the temple of IIT Ropar. Regular Puja and Aarati were performed in the mornings and evenings in the presence of a large number of devotees. The main attraction of the festival was Visarjan of the idol which was carried out on the last day of the festival. After the Maha-Aarti and the distribution of Maha-Prasad a procession consisting of UG and PG students and staff members proceeded towards the river Satluj to carry out the Visarjan. The procession started from the IIT Campus and ended at the Satluj (3 km from the Campus) with the immersion of the Ganesh Idol. A high level of enthusiasm was witnessed among all present.





INDIAN INSTITUTE OF TECHNOLOGY ROPAR Academic Calendar for Second Semester of AY 2012-13

ı	Registration UG & PhD	Jan 01 (Tue)
2	Commencement of classes	Jan 02 (Wed)
3	Late registration & finalization of registration	Jan 08 (Tue)
4	Last date for course Add/Drop	Jan 09 (Wed)
5	Last date for adding courses in lieu of courses dropped on Jan 09, 2013 by UG & PG Section	Jan I I (Fri)
6	Midterm evaluation project for UG	Feb 21 (Thu) – Feb 22(Fri)
7	Mid Semester Examination	Feb 25 (Mon) -March 01 (Fri)
8	Last date for return of marked answer scripts	March 08(Fri)
09	Last date for Audit and Withdrawal	March 12 (Tue)
10	Last date for getting mid semester course evaluation form filled	March 13(Wed)
11	Cultural festival [No classes on 15 March(Fri)]	March 15 (Fri) – March 16 (Sat)
12	Last date for departments to float courses for next semester	March 20 (Wed)
13	Last date for Submission of project reports for UG students	April 05 (Fri)
14	Last date for getting course evaluation form filled	April 08(Mon)
15	Course registration for next semester	April 08(Mon) – April 10 (Wed)
16	Project viva-voice for UG	April I 0 (Wed) - April I 2 (Fri)
17	Last day of classes	April 29 (Mon)
18	Major Examination	April 30 (Tue) - May07 (Tue)
19	Last date for viewing of answer scripts by students	May 15 (Wed)
20	Last date for grades to reach UG/PhD section	May 16 (Thu)
21	Summer Vacation starts	May 16 (Thu)
22	Display of grades by UG/PhD section	May 24 (Fri)
23	Last date for progress report submission for PhD	July 18 (Thu)
24	Summer Vacation ends	July 21 (Sun)

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