HILLY RAMBLINGS

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Editorial Board:

Contact:

hillyramblings@juit.ac.in

Publications

Here is a list of publications of research papers in journals by faculty members of the University, across various Departments.

- Nitin Gupta and Rakesh Kumar Bajaj, "Stochastic Comparisons of Heterogeneous Samples with Homogeneous Exponential Samples", International Journal of Mathematical and Computational Sciences, Vol. 6, 129-131, 2012.
- Abhishek Kandwal and Sunil Kumar Khah "Circuital Method For Admittance Calculation Of Gap-Coupled Sectoral Antennas", Microwave And Optical Technology Letters, Vol. 54, No. 1, January 2012 DOI 10.1002/mop.pp- 212-213.
- Suresh Kumar, Pankaj Sharma and Vineet Sharma, "CdS nanofilms: Synthesis and the role of annealing on structural and optical properties" Journal of Applied Physics (2012) Vol. 111 (2012) 043519.
- Sunanda Sharda, Neha Sharma, Pankaj Sharma and Vineet Sharma, "Band Gap and Dispersive Behaviour of Ge Alloyed a - SbSe Thin Films Using Single Transmission Spectrum" Materials Chemistry and Physics DOI: 10.1016/j.matchemphys.2012.02.045.
- R. Kumar, Pankaj Sharma and V. S. Rangra, "Kinetic studies of bulk Se92Te8-xSnx(x = 0, 1, 2, 3, 4 and 5) semiconducting glasses by DSC technique" Journal of Thermal Analysis and Calorimetry; DOI: 10.1007/s10973-011-1661-z.
- Anshu Aggarwal, Surinder K. Singla, Manish Gandhi, Chanderdeep Tandon, "Preventive and curative effects of Achyranthes aspera Linn. extract in experimentally induced nephrolithiasis", Indian Journal of Experimental Biology Vol 50, 201-208, 2012.
- Kanu Priya Aggarwal, Simran Tandon, Priyadarshini Pathak, Shrawan Kumar Singh, Chanderdeep Tandon, "Identification of novel antilithiatic cationic proteins from human calcium oxalate renal stone matrix by MALDI TOF MS", European Urology Supplements, Vol 11, Issue 1, 2012.
- Kanu Priya Aggarwal, Simran Tandon, Shrawan Kumar Singh, Chanderdeep Tandon,"Proteomic analysis of human calcium oxalate renal stone by 2-D PAGE and in vitro analysis of bioactivity of the proteins", European Urology Supplements, Vol 11, Issue 1, 2012.
- Sree Krishna Chanumolu, Chittaranjan Rout, and Rajinder S. Chauhan. 2012, "UniDrug-Target: a computational tool to identify unique drug targets in pathogenic bacteria", Feb 17, 2012. PLoS ONE e32833. doi:10.1371/journal.pone.0032833.
- Simran Tandon, Amrita Arora, Sonali Singh, Jitender Monga and Shagun Arora, "Antioxidant profiling of triticum aestivum (wheatgrass) and its antiproliferative activity in MCF-7 breast cancer cell line", Journal of Pharmacy Research ,Vol.4(12),4601-4604, 2011.
- Simran Tandon & Saras Jyoti, "Embryonic stem cells: An alternative approach to developmental toxicity testing", J. Pharm. Bioallied. Sci.,Vol.4(2), 96-100, 2012.
- Naresh K. Manchukonda, Balasubramanian Sridhar, Pradeep K. Naik, Harish C. Joshi, Srinivas Kantevari, "Copper(I) mediated facile synthesis of potent tubulin polymerization inhibitor, 9-amino-a-noscapine from natural α-noscapine", Bioorganic & Medicinal Chemistry Letters, Vol 22 2983–2987, 2012.
- Sunil Gupta, Manish S. Bhoyar, Jitendra Kumar, Ashish R. Warghat, Prabodh K. Bajpai, Muzamil Rasool, Gyan P. Mishra, Pradeep K. Naik and Ravi B. Srivastava, "Genetic diversity among natural populations of Rhodiola imbricata Edgew. from trans- Himalayan cold arid desert using random amplified polymorphic DNA (RAPD) and inter simple sequence repeat (ISSR) markers", Journal of Medicinal Plant Research, Vol. 6(3), 405-415, 2012.
- Lavkush Sharma, Bhupendra Kumar Pathak , Ramgopal Sharma, "Breaking of Simplified Data Encryption Standard Using Genetic Algorithm", Global Journal of Computer Science and Technology, Vol. XII, Issue V, Version I, pp.55-59, March 2012.

- Jatindra Kumar Pradhan and Sudhir Kumar. "Metals bioleaching from electronic waste by Chromobacterium violaceum and Pseudomonad sp." Waste Manag. Res. (doi: 10.1177/0734242X12437565, online first 27 March, 2012).
- Sudhir Kumar, Aditya Bhalla, Rajesh V. Shende and Rajesh Sani. "Decentralized thermophilic biohydrogen: A more efficient and cost-effective process." BioRes.,Vol. 7(1), 1-2, 2012.
- Chauhan D.S, Chandra S., Gupta A., and Singh T.R., "Molecular modeling, docking and interaction studies of Human-plasmogen and Salmonella-enolase with enolase inhibitors", Bioinformation, Vol. 8, 185-188, 2012.
- Mohammed Usman, "Convolutional fountain distribution over fading wireless channels", International Journal of Electronics, Taylor and Francis, online DOI:10.1080/00207217.2011.651694, February 2012.
- Davinder S Saini and Munish Sood, "Fair Single code and Multi code designs for 3G and beyond CDMA System", Springer Wireless Personal communication, Mar. 2012. online DOI 10.1007/s11277-012-0569-7.
- Neeru Sharma and Davinder S Saini, "Code scattering and reduction in OVSF code blocking for 3G and beyond mobile communication systems", WSEAS transactions on Communications, Volume 11(2), pp. 91-101, Feb. 2012.

Conferences

There were 12 conference presentations during the quarter, 11 within India and 1 abroad.

Here is a list of faculty members who presented papers in various international and national conferences, both in India and abroad.

- Anshu Aggarwal, Manish Gandhi, Shrawan K Singh, Surinder K Singla, Chanderdeep Tandon. Tribulus terrestris extract as curative agent in experimentally induced urolithiasis. 27th Annual EAU Congress, Paris Feb. 24-28 2012.
- S. Sharad Kumar, Navin Tailor, Hong Lee Boon, Manu Sharma. Synthesis of Lantadene A and B congeners: Cytotoxicity, apoptosis induction and expression of transcription factors in HL-60 cells, Abstract book of International Conference on Ethnopharmacology, Kolkata, Feb. 17-19, 2012.
- P.B.Sood, Hina Singhal and Abhinay Garg, "Investment Behaviour of Salaried Individuals: A Case of Shimla Town", National Seminar on Global Economy & Commerce: Challenges & Opportunities 2012, School of Management Studies – Bhaddal, March 16-17, 2012.
- Ashish Kumar (2012). "Turbulence measurements around Non-Uniform Cylindrical Pier." Proc. Conf. on River Hydraulics 2012, MMU Mullana, India.
- Rajesh Goyal, Anil Kumar, Ashok K. Gupta, Manik Goyal, "Study of Effects of Micro-silica Variation on M80 Concrete", Proc. International Conference on Sports Biomechanics, Emerging Technologies and Quality Assurance in Technical Education, Organized by Prannath Parnami Universe, Hisar (Haryana), 17-18 March 2012.
- Eshan Ganju, Himneet Singh, Mohit Sharma, Garima Duggal, Dr. S.K. Jain, "Design chart method of foundation design: A better way of geotechnical design of foundations," Proc. SCTACE-2012.
- Garima Duggal, Mohit Sharma and S.K. Jain, "Deep Soil Mixing versus Jet Grouting," Proc. SCTACE-2012.
- Meenakshi Sood, Design of Triangular Split Metamaterial Planar Antenna, National Conference on Advances in Video, Cyber Learning and Electronics (ADVICE 2012), at NITTTR Chandigarh, Mar. 1-2, pp-78, 2012.
- R. Kumar, Pankaj Sharma, V.S. Rangra, "Bonding arrangement and thermal analysis of Se-Te-Sn chalcogenide glasses" International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials (ICWNCM-2012) held at University of Delhi during March (13-16), 2012; LC-218.
- A. Kumar, P. Heera, Pankaj Sharma, R. Sharma, "To Study the Optical Parameters of Se30Te70-xSnx system thin films" International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials (ICWNCM-2012) held at University of Delhi during March (13-16), 2012; LC-247.
- A. Kumar, P. Heera, Pankaj Sharma, P. B. Barman and R. Sharma, "Optical constants and optical band gap in amorphous Sb doped Se-Bi-Te thin films" International Conference and Workshop on Nanostructured Ceramics and other Nanomaterials (ICWNCM-2012) held at University of Delhi during March (13-16), 2012; LC-213.
- R. S. Raja Durai and Meenakshi Devi, ``Coding and capacity calculation for the T-User F-Adder channel," in proceedings of the International conference on Mathematical Modelling and Scientific Computation (ICMMSC) as an edited volume in Communications in Computer and Information Science (CCIS 283), pp. 542-551, March 16-18, 2012, Tamil Nadu, India.

Patent Granted / Filed

One patent granted and one is filed by the Dept. of BT-BI, during the quarter.

- Chanderdeep Tandon, Anu Chaudhary, Shweta Gupta and Shobhit Jain "A novel dye composition prepared from plant parts of Lawsonia inermis and the method of preparation thereof": Application no. 1216/DEL/2007 Patent Granted (Patent No. 251481)
- Sood H, Varun Kumar and RS Chauhan. 2012. filed a patent in India on " Isolation and purification of Picroside-I and Picroside-II". Patent Application No. 155/DEL/2012.

Awards and Honours

- Department of Biotechnology and Bioinformatics has been awarded Rs. 1.5 crore by DST under "Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST) Program for the purchase of a MicrOTOF-QII system.
- Chanderdeep Tandon and his research group was awarded Best Research Poster award (International) at 27th Annual Congress of European Association of Urology (EAU) at Paris, Feb. 27-28, 2012 for the research work entitled "Prophylactic effect of Tribulus terrestris fruits on experimentally induced urolithiasis in rats".
- Sanya Bakshi, Sneha Gulati, Bhupinder Singh Sandhu, Pooja Tandon, Varun Kumar, Rajinder Chauhan and Hemant Sood were awarded Best Poster at National Seminar on Plant Cell issue and Organ Culture: Emerging Trends, Deptt. of Botany, Aligarh Muslim University, Aligarh, India, March 10-11, 2012 for the work entitled "Large-scale in vitro multiplication of critically endangered herb Swertia chirayita in suspension cultures."
- Department of Civil Engineering organized a student conference on Recent Technological Advancement in Civil Engineering (SCTACE-2012) on 31 March 2012. The inaugural lecture to the conference was delivered by Prof. Manoj Datta, Director PEC University of Technology, Chandigarh followed by a keynote lecture by Dr. Rajbal Singh, Joint Director, CSMRS New Delhi. Also an invited lecture was given by Graham Morphett, Director, Uretek India Pvt. Ltd. A total of 23 papers were presented. First prize for presentation went jointly to Eshan Ganju and Karan Sadhwani of JUIT and second prize to Quresh Vasanwala, CEPT University, Ahmedabad. During the conference, 3rd volume of department's student magazine SANRACHNA was unveiled. The conference, coordinated by Dr. Ashok Gupta, Chandrapal Gautam and Abhilash Shukla, had nearly 60 participants from outside.

Department of Civil Engineering organized a student conference on Recent Technological Advancement in Civil Engineering (SCTACE-2012) on 31 March 2012.

Promotions and Appointments

- Dr. Nitin Gupta (MA) has been promoted to Senior Lecturer.
- Dr. Dharmendra Jain joined as a lecturer in the Department of BT/BI at JUIT, Waknaghat (HP). He completed his B. Pharm. and M. Pharm. from Dr. H.S. Gour Vishwavidyalaya, Sagar, (MP), and obtained PhD from IIT Bombay. He was a Post Doctorate fellow at University of Copenhagen, Denmark.

Invited Talks

- Dr. Rajesh Goyal (CE) was invited as keynote speaker in International Conference on Sports Biomechanics, Emerging Technologies and Quality Assurance in Technical Education Organized by Prannath Parnami Universe, Hisar (Haryana) during 17-18 March 2012.
- Dr. Tiratha Raj Singh (BI & BT) delivered talks in a DBT sponsored workshop on "Computational Genomics and Proteomics", at CSK HP Agricultural University, Palampur during March, 2-3, 2012.
- Dr. Amit Srivastava (HSS) was invited as a resource person to deliver a talk on "Economic Analysis of State Accounts Data (FRBM)" to Trainee IA&AS Officer, at Shimla, 1st March, 2012.
- Prof. Nirupama Prakash (HSS) was invited as a resource person to deliver a Talk on "Involving Women in Science & Technology: An Empowering Tool" and chair a session at the Women's Science Congress as part of 99th Science congress with the theme "Science and Technology for Inclusive Innovation-Role of Women" held at KIIT, Bhubaneswar, January 3-7, 2012.

During the quarter, two research scholars completed their PhDs.

PhDs Completed

- Tamanna Anwar completed her PhD in Biotechnology & Bioinformatics on "Mining Bacterial Strains from a Rock Salt Mine for Halotolerance Genes and Enzymes" under the supervision of Prof. R. S. Chauhan, March, 2012
- Jitendra Kumar completed his PhD in Biotechnology & Bioinformatics on "Assessment of Genetic Diversity and Artemisinin Content Among Genotypes of Artemisia annua and Related Species from the Ladakh Region, India" under the supervison of Dr. Pradeep Kumar Naik and Dr. Gyan Prakash Mishra (March, 2012).

Workshop Attended

- Mr. Puneet Bhushan Sood (HSS) and Ms. Neha Aggarwal (HSS) attended a workshop on "Data Analysis for Management Research" organized by IIM, Kozhikode during Jan 23-27, 2012.

Prof. T.S. Lamba (ECE) chaired a technical session in Eighteenth National Conference on Communications (NCC 2012), Feb 3-5, 2012 at IIT Kharagpur.

Bits 'n' Pieces

- Dr. Nitin Gupta (MA) has been put in the advisory panel of National conference on modeling, simulation and optimization 2012 as a member, scheduled to be held on July 20, 2012, at Chitkara University, Punjab.
- Prof. M Chakraborty, IIT Kharagpur delivered guest lectures on Cordic Algorithm and Distributed Arithmetic at JUIT on March 26. 2012.
- ECE department organized an International conference on Signal Processing Computing and Control (ISPCC) from Mar 15-17, 2012.
- Dr. Vinay Kumar (ECE) is on sabbatical visit to Spain for Post doctorate Fellowship in March 2012.
- Mohammed Wajid (ECE) went to IIT Delhi to pursue his PhD in Jan 2012.

Knowledge Bytes

In this issue, we present a little biography of some of the great mathematicians who has made tremendous contribution in the literature:

Bháscara, also called Bhaskaracharya, (1114-1185), the most famous of medieval Indian mathematicians, made achievements in several fields of mathematics including solid geometry, combinations, and advanced arithmetic methods. Bhaskara'a mathematical contributions are chiefly found in two chapters, the Lilavati and the Bijaganita, of a major astronomical work, the Siddhantasiromani. These include techniques of solving systems of linear equations and basic combinatorial formulas. Bháscara's achievements came centuries before similar discoveries in Europe. It is an open riddle of history whether any of Bháscara's teachings trickled into Europe in time to influence its Scientific Renaissance.

So far as the theories of mathematics are about reality, they are not certain; so far as they are certain, they are not about reality. – Albert Einstein

George Boole (1815-1864) was an English mathematician most famous for his work in logic. He was too poor to attend college and became an elementary school teacher at age of 16. He gradually developed his math skills; as a young man he published a paper on the calculus of variations, and soon became one of the most respected mathematicians in England despite having no formal training. He was noted for work in symbolic logic, algebra and analysis, and also was apparently the first to discover invariant theory. When he followed up Augustus de Morgan's earlier work in symbolic logic, de Morgan insisted that Boole was the true master of that field, and begged his friend to finally study mathematics at university. Boole couldn't afford to, and had to be appointed Professor instead! Although very few recognized its importance at the time, it is Boole's work in Boolean algebra and symbolic logic for which he is now remembered; this work inspired computer scientists like Claude Shannon. Boole's book An Investigation of the Laws of Thought prompted Bertrand Russell to label him the "discoverer of pure mathematics." Boole once said "No matter how correct a mathematical theorem may appear to be, one ought never to be satisfied that there was not something imperfect about it until it also gives the impression of being beautiful."

Euclid (322-275 BC), Greece/Egypt, is responsible for the most famous mathematics text of all time, the Elements. Not only does this work deal with the standard results of plane geometry, but it also contains three chapters on number theory, one long chapter on irrational quantities, and three chapters on solid geometry, culminating with the construction of the five regular solids. He founded the school of mathematics at the great university of Alexandria. He was the first to prove that there are infinitely many prime numbers; he stated and proved the unique factorization theorem; and he devised Euclid's algorithm for computing greatest common divisor.

To parents who despair because their children are unable to master the first problems in arithmetic I can dedicate my examples. For, in arithmetic, until the seventh grade I was last or nearly last. - Jacques Salomon Hadamard

Srinivasa Ramanujan Iyengar (1887-1920), an Indian mathematician, who was a self-taught prodigy and lived in a place distant from his mathematical peers. He suffered from poverty: childhood dysentery and vitamin deficiencies probably led to his early death. Yet he produced 4000 theorems or conjectures in number theory, algebra, and combinatorics. He might be almost unknown today, except that his letter caught the eye of Godfrey Hardy, who saw remarkable, almost inexplicable formulae which "must be true, because if they were not true, no one would have had the imagination to invent them." Ramanujan's specialties included infinite series, elliptic functions, continued fractions, partition enumeration, definite integrals, modular equations, gamma functions, "mock theta" functions, hypergeometric series, and "highly composite" numbers. Much of his methodology, including unusual ideas about divergent series, was his own invention. (As a young man he made the absurd claim that 1+2+3+4+... = -1/12. Later it was noticed that this claim translates to a true statement about the Riemann zeta function, with which Ramanujan was unfamiliar.) Ramanujan's innate ability for algebraic manipulations equaled or surpassed that of Euler and Jacobi.