



HILLY RAMBLINGS

JUIT's Quarterly Newsletter



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About the Newsletter

We are pleased to release the second issue of the newsletter. We have started a new section from this issue - "Knowledge Bytes". In this section we intend to provide information which we hope is interesting and useful to everyone. This time we have given some information regarding the Calendar and how to find a day for a particular date. This time the information has been provided by the Editorial Board but we would like to get such items from our readers.

Knowledge Bytes

We hope that you'll find the section useful and informative.

This is the time of the year when we often start planning for dates in the new year but find that the lack of a new calendar prevents us from looking up which date falls on which day. What do we do when this happens? To see the January or October calendars, look up the May of the previous year. The dates fall on the same days. Similarly February, March and November can be seen from June, while April and July can be got from October. Similarly the months from May to August can be got from August to November respectively. September and December are got from July. Ignore any date in the old calendar which does not occur in the new. All this is valid if the coming year is a normal year, for leap years we have to change the table for the months from March to December.

This is fine if you need to check dates in the coming or current year. What happens if you need to find on which day a particular date occurred several years back or will occur some years hence? Use the formula given below to get the answer.

Let us assume that we need to find out on which day the date DD – MM – CCYY occurred, where DD is the date, MM the month and CCYY the year.

$$\text{Compute the sum } S = YY + \left\lfloor \frac{YY}{4} \right\rfloor - 2CC + \left\lfloor \frac{CC}{4} \right\rfloor + f(MM) + DD + x .$$

Divide S by 7 and keep the remainder R (if the answer comes negative add 7 to it). $[X]$ is the "floor function of X" and represents the integral part of the decimal fraction X. $x = 4$ if the month is either January or February of a leap year, otherwise it is 5. $f(MM)$ is given by the values 1,4,4,0,2,5,0,3,6,1,4,6 for the months January, February, March etc. The values of x have been chosen to make $f(MM)$ easy to remember (month triplets are: $12^2, 5^2, 6^2, 12^2+2$). The day of the week is given by the value of R, 0 being Sunday, 1 being Monday, 2 Tuesday etc.

This formula works for the days from 1583 A.D. by which time a major part of the world had adopted the Gregorian Calendar, and will work till 2999 A.D. There is a bit of confusion about whether 3000 A.D. will be a leap year, so do not use this formula if you want to find out on which day you will celebrate your birthday in the year 3012. This formula may work, or it may not.

Editorial Board:

- Tejinderbir Singh Lamba
- Chanderdeep Tandon
- Sunil Kumar Khah
- Subodh Kumar Jain
- Davinder Singh Saini
- Rakesh Kumar Bajaj
- Shipra Sharma
- Amit Srivastava


Contact:

hillyramblings@juit.ac.in




Publications


Between October to December, 2010, the total number of research papers published by various departments, in different journals of repute is 20. The details are listed below:



Prof. T S Lamba (ECE) attended the International Conference on Communications, Computers and Devices (ICCCD) 2010, IIT Kharagpur as a special invitee on Dec 10-12, 2010.



JUIT successfully organized 2 workshops.

- Srivastava, Amit and Medury, Yaj , “Analyzing India’s Intra-Industry Trade in Post-Liberalization Era”, Indian Journal of Economics and Business, Vol. 9, No. 4, pp. 783-802, December 2010.
 - Vivek Kumar Sehgal, Durg Singh Chauhan : State observer controller design for packets flow control in networks-on-chip. Book chapter, The Journal of Supercomputing 54 (3): 298-329 (2010).
 - Priyadarshini, Shrawan Kumar Singh, Chandrdeep Tandon Effect of biomolecules from human renal matrix of calcium oxalate monohydrate stones on in vitro calcium phosphate crystallization International Brazilian Journal of Urology (2010) 36(5) 621-628
 - Aggarwal, S Tandon, S. K. Singla, C. Tandon In vitro evaluation of Terminalia arjuna on calcium phosphate and calcium oxalate crystallization. Indian Journal of Pharmaceutical Sciences. (2010) 72: 340-345.
 - Pradeep Kumar Naik, Abhishek Dubey, Komal Soni, Rishay Kumar, Harvinder Singh The binding modes and binding affinities of epipodophyllotoxin derivatives with human topoisomerase II, J. Mol. Graph. Model. (2010), doi:10.1016/j.jmkgm.2010.10.005
 - Komal Soni, Shruti Rawat, Ankit Gupta, Karma Yangzom, Pradeep Kumar Naik, Harvinder Singh Genetic Characterisation of Rhodiola rosea Using Gene Specific SSR and CAPS Molecular Markers, Genetic Engineering and Biotechnology Journal, Volume 2010: GEBJ-11, 1-10
 - Ramana J, Gupta D, 2010 Machine Learning Methods for Prediction of CDK-Inhibitors. PLoS ONE 5(10): e13357. doi:10.1371/journal.pone.0013357
 - Sharat Chandra, Digvijay Singh, and Tiratha Raj Singh, Prediction and characterization of T-cell epitopes for epitope vaccine design from outer membrane protein of Neisseria meningitidis serogroup B, Bioinformation 5(4):155-161 (2010)
 - Mamta Kumari, Sudhir Kumar, R. S. Chauhan, and K Ravikanth “Bioconversion of herbal industry waste into vermicompost using an epigeic earthworm Eudrilus eugeniae” Waste Manag Res 0734242X10384432, first published on October 15, 2010 as doi:10.1177/0734242X10384432.
 - Sudhir Kumar “Fast track funding units – An option to attend international conferences.” Current Science. 2010. 99(11) 1494.
 - K. Kumar, N. Thakur, S C Katyal and Pankaj Sharma, “A Study of the Physical Properties of $Te_{15}(Se_{100-x}Bi_x)_{85}$ Glassy Alloys” Defects and Diffusion Forum Vol 305-306 (2010) 61 (Scientific Journal)
 - K. Kumar, S.S. Bhatt, N. Thakur and Pankaj Sharma, “Calorimetric study of $Te_{15}(Se_{100-x}Bi_x)_{85}$ glassy alloys using differential thermal analysis” Philosophical Magazine Vol 90 (2010) 3907 (Taylor & Francis: UK).
 - J. Mohan , S. Maheshwari, and D. S. Chauhan “ Voltage mode cascaded all-pass sections using single active element and grounded passive components” Circuits and Systems (USA), Vol. 1, pp. 5-11, 2010. doi: 10.4236/cs.2010.11002.
 - S. Maheshwari, J. Mohan, D. S. Chauhan “Novel cascaded all-pass/notch filters using a single FDCCII and grounded capacitors.” Circuits, Systems, and Signal Processing (CSSP), (USA), 2010. DOI: 10.1007/s00034-010-9238-9
 - S. Maheshwari, J. Mohan, D. S. Chauhan “ High input impedance voltage-mode universal filter and quadrature oscillator” Journal of Circuits, Systems, and Computers (USA), Vol. 19, No. 7, pp. 1597-1607, 2010. DOI: 10.1142/S0218126610006943
 - J. Mohan, S. Maheshwari, D.S. Chauhan “Minimum component based first-order all- pass filter with inverting and non-inverting outputs” International Journal on Recent Trends in Engineering & Technology [IJRTET] , ISSN 2158-5563, Vol. 3 No. 3, pp. 61-64, 2010. DOI: 01.IJRTET.3.3.96
 - J. Mohan, S. Maheshwari, D.S. Chauhan “Minimum grounded component based voltage- mode quadrature oscillator using DVCC” International Journal on Recent Trends in Engineering & Technology [IJRTET] , ISSN 2158-5563 , Vol 3, No. 4, pp. 13-16, 2010. DOI: 01.IJRTET.3.4.153.
 - R. Goyal, A.K. Gupta, A.K. Ahuja, “Variation of Wind Load Distribution on Gable Roof Building With Varying Length of Attached Canopy” International Journal of Civil Engineering and Technology, Vol. 1, Issue 1, pp 75-83, 2010.
 - S.K. Jain, Atul Nanda, “A constitutive model for creep rupture,” Mechanics of Advanced Materials and Structures, 17(7), 459-466, Nov. 2010.
 - U.C. Kothiyari, Ashish Kumar, “Temporal variation of scour around circular bridge piers.” Journal of Hydraulic Engineering, ISH, Vol. 16, SP-1, pp. 35–48, 2010.
 - Yashwant Singh and Manu Sood, “The Impact of the Computational Independent Model for Enterprise Information System Development”, International Journal of Computer Applications Volumes11(8), pp 21–26, December 2010, ISSN 0975-8887.
 - Sunil Bhooshan, Shipra Sharma, " A Lossy/Lossless Coding Algorithm Using Histogram", Advances in Visual Computing, Lecture Notes in Computer Science, Springer- Verlag, 2010, Volume 6455/2010, 458 – 464.
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There were 18 conference presentations within India and 1 outside India.

Conferences

During the present quarter, faculty members of different departments presented several research papers in different national and international conferences. A list of these faculty members is given below:

- Mr. Amit Srivastava (PD) presented a paper titled “India’s Intra-Industry Trade with Different Economies” in EIITF 2010 conference at Indian Institute of Foreign Trade, New Delhi, during 16-17 December 2010.
- K. Kumar, Pankaj Sharma and Nagesh Thakur, “Dielectric relaxation in Bi doped Se-Te glassy alloys” National Conference on Recent Advances in Materials Science & Engineering : A Multidisciplinary Approach [RAMSE; JUET Guna] 2010.
- Parikshit Sharma, Varun Mishra and Pankaj Sharma, “Activation energy study of $\text{Ge}_{17}\text{Se}_{83-x}\text{Sb}_x$ glassy system” 55th DAE Solid State Physics Symposium 2010 (December 26 – 30, 2010 Manipal University, Karnataka).
- Rajesh Kumar, Pawan Kumar and Nagesh Thakur “A review of Nanotechnology and a brief description of synthesized nanoparticles” National Scientific and technical Seminar, TBRL (DRDO lab) Chandigarh, India , 7-8 December 2010.
- Sharma K, Lathar P K, Chauhan R S, Tandon C. Inhibitory activity of Fagopyrum esculentum and Fagopyrum tataricum on in vitro thoracic aorta calcification. 2nd Biennial International conference on new developments in drug discovery from natural products and traditional medicines. NIPER, SAS Nagar, Punjab, India Nov. 20-24, 2010
- Sharma A. & Chauhan RS. 2010. Comparative Analysis of Genes Involved in oil biosynthesis and Accumulation in Plants for Candidate Gene Markers Identification. International Conference on Genomics Sciences- Recent Trends (ICGS 12-14 Nov.), Madurai Kamraj University (TN), India.
- Gupta N, Sunnil K Sharma and RS Chauhan. 2010. Comparative genomics of rutin biosynthesis genes in a nutraceutical food crop, Fagopyrum tataricum. International Conference on Genomics Sciences- Recent Trends (ICGS 12-14 Nov.), Madurai Kamraj University (TN), India
- Dipankar Sen attended INTERNATIONAL CONFERENCE ON CLINICAL TRIALS -; Mumbai organized by Confederation of Indian Industry & Ministry of Science & Technology, Govt of India) 19-20 November 2010
- Ashish R Warghat, Prabodh K Bajpai, Hemant Sood, Ashutosh A Mathur and SB Singh Exploring genetic diversity in *Dactylorhiza hatagirea* (D. Don) a critically endangered orchid in Trans-Himalayan region.. Indian Horticulture Congress. New Delhi Nov. 2010
- Sharma K, Lathar P K, Chauhan R S, Tandon C. Inhibitory activity of Fagopyrum esculentum and Fagopyrum tataricum on in vitro thoracic aorta calcification. 2nd Biennial International conference on new developments in drug discovery from natural products and traditional medicines. NIPER, SAS Nagar, Punjab, India Nov. 20-24, 2010
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- Vipin Balyan and Davinder S Saini, An efficient multi code assignment scheme to reduce call establishment delay for WCDMA networks, in proc. of international conference on parallel, distributed and grid computing (PDGC), pp. 263-268, oct 28-30, Solan, INDIA (IEEE explore), DOI: 10.1109/PDGC.2010.5679907
- Bhasker Gupta and Davinder S Saini, BER Performance Improvement in Coded-OFDM Systems using Equalization Algorithms, accepted for publication, in proc. of international conference PDGC 2010, Page(s): 49 – 54, DOI : 10.1109/PDGC.2010.5679605 (IEEE explore)
- Ajay Kant, Arnesh Sharma, Sanchit Aggarwal, Satish Chandra, "An ACO Approach to Job Scheduling in Grid Environment", In Proceedings SEMCCO 2010, LNCS 6466, pp. 286–295, Springer-Verlag Berlin Heidelberg 2010.
- Dr. S.K. Jain (CE) et. al., presented two papers titled, “Analysis and design of large storage caverns,” and “Hydraulic confinement of hydrocarbons in unlined rock caverns,” to the 6th Asian Rock Mechanics Symposium, International Society for Rock Mechanics (ISRM), held in New Delhi during 23-27 Oct 2010.

IEEE students Branch organized a technical festival in November, 2010.

Prof. Karanjit Singh (Maths) has taken over from Prof. S.C. Katyal (PHY) as the Faculty Incharge of JYC.

1 faculty member and 1 research scholar have completed their PhDs.



Prof. Nirupama Prakash (PD) has got a One-Year project on “Sociological & Clinical Disabilities Amongst Aged Population in Himachal Pradesh” sponsored by Faculty of Engineering & Industrial Sciences, Swinburne University of Technology, Hawthorn, Australia.



BioSpectrum Award (trophy and citation) was presented to the Department of Biotechnology & Bioinformatics for being the Best Biotechnology School (Private) in India on 17th December 2010 at Bangalore.

- Dr. S.K. (CE) Jain presented a paper titled, “On the nature of secondary compression in soils.” to Indian Geotechnical Conference (IGC-2010) at IIT Bombay during 16-18 Dec 2010.

Activities @ JUIT

- Department of CSE/IT organized a 3 Days International Conference, “Parallel, Distributed and Grid Computing (PDGC-2010)”, from 28Oct – 30Oct 2010. All the accepted papers have appeared in IEEEExplore.
- Department of Professional Development organized One-day Workshop on “Rejuvenating Women Workforce in 21st Century: Issues and Challenges” in collaboration with Department of Management Studies, IIT Roorkee on 4th October 2010.
- The Department of Civil Engineering organised a 2-day training programme on FEM based software ANSYS conducted by Mr. Amit Srivastava of Solvtech Ltd., New Delhi during Nov. 20-21, 2010. The programme was coordinated by Dr. Alok D. John and Mr. Anil Dhiman.

Invited Talks

- Prof. T. S. Lamba (ECE) delivered a keynote address on Trends in Speech Processing Technology in National Conference on Advances in Digital Signal Processing held in Chitkara Institute of Engineering and Technology, Baddi (H.P.) on October 22-23.
- Dr. D. S. Saini (ECE) delivered an invited talk on 3G and Beyond Mobile Communication at Baddi University of Energy Science and Technology, Baddi (H.P.) on October 1st.
- Prof. Nirupama Prakash (PD) invited as a resource person to the *First Meeting of Asian and Spanish Women* and as a keynote speaker on Gender and Culture of Peace at the Round Table on ‘Gender Equality and Development’ organized by Casa Asia, Barcelona, Spain during October 25-27, 2010.
- Prof. C. Tandon (BI/BT/PHY) delivered an invited talk on “Identification and Characterization of a Calcium Oxalate Crystal Growth Protein Inhibitor from Human Renal Stone Matrix” at International Conference on Analytical & Bioanalytical, OMICS Publishing Group Nov. 1-3, 2010 Hyderabad, India.
- Dr. Neeraj Mahindroo (BI/BT/PHY) delivered an invited talk on “Novel Small Molecule Inhibitors of Gli1-Mediated Transcription as Pediatric Anticancer Agents” at IIT, Mandi, India on Oct. 22.
- Prof. Nirupama Prakash (PD) was invited as a Guest Speaker to deliver lectures on “Gender & Development -Special focus on Science & Technology” during the Refresher Course on Gender Studies, organized by Centre for Women Studies, Rajasthan University, Jaipur, November 27, 2010.

Awards and Recognition

- Dr. S.K. Jain was given the IGS-ONGC Biennial Award during the inaugural ceremony of the Indian Geotechnical Conference (IGC-2010) held at IIT Bombay during 16-18 Dec 2010. This is a best paper award of the Indian Geotechnical Society (IGS) and was given for a paper presented to IGC-2008 held at IISc Bangalore in Dec 2008.
- Govt. Sponsored Grant – Dr. Simran Tandon, Assistant Professor Deptt. of Biotechnology & Bioinformatics has got a DBT sponsored project entitled, “The potential of human embryonic stem cells in developmental toxicity testing”.

PhDs Completed

- Mr. Satish Chandra completed his PhD in Computer Science & Engineering on “A Particle Swarm Optimization Based Method for Detection and Grading of Brain Tumors” on 7th December 2010.
- Ms. Anu Chaudhary completed her PhD in Biotechnology & Bioinformatics on “In-vitro Studies on Antilithiatic Properties of Tamarindus Indica and Terminalia Arjuna” under the supervision of Prof. C. Tandon (Nov 30, 2010)

Promotions and Appointments

- Dr. Satish Chandra (CSE/IT) has been promoted to Assistant Professor w.e.f. December 08, 2010.
- Dr. Surijit Hazra has joined the department of Physics, as a Lecturer, in Dec.2010.

Bits ‘n’ Pieces

- Prof. Harinder Singh (Maths) was a member of Conference Organizing Committee of the Nineteenth International Conference: (IMST 2010-FIM XIX) on Interdisciplinary Mathematical and Statistical Techniques at Patna University, Patna, Bihar, India during December 18-20, 2010.