

**Evaluative Report of the Department**  
*Please provide data for last 5 years*

1. Name of the Department: School of Mathematics and Computer Applications
2. Year of establishment : 2002
3. Is the Department part of a School/Faculty of the University?  
**No**
4. Courses / Programmes and subject combinations offered

<b>Title</b>	<b>Field of Specialization</b>	<b>Sanctioned Intake</b>	<b>Duration (Years)</b>	<b>Year of Starting</b>
B.E.	Software Engineering & Management	60	4	2014
M.Sc.	Mathematics and Computing	30	2	2007
MCA	Computer Applications	120	3	2002
M.Tech.	Computer Science & Applications	30	2	2009
PhD	Mathematics & Computer Applications	---	---	2002

**Further school is also engaged in imparting instructions in core courses on Mathematics to UG and PG students of the University.**

5. Interdisciplinary programmes and departments involved:

**SMCA started BE ( Software Engineering and Management) in collaboration with LM Thapar School of Management from session 2014-15. Purpose of this programme was to provide student the necessary leadership qualities alongwith the technical skills.**

6. Interdisciplinary programmes and departments involved:

**Courses in collaboration with other universities, industries, foreign institutions, etc Queensland University, Australia, for GBI and Advanced Business Application Programming (ABAP) (MCA/MTech students)**

7. Details of programmes discontinued, if any, with reasons :

**B.Sc.-M.Sc. Five year Integrated Programme in Mathematics and Computing (Regular Mode)  
Due to few takers**

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System :  
**Semester**

9. Participation of the department in the courses offered by other departments :

**Teaching mathematics courses to B.E. (All disciplines), M.E./M. Tech, PhD students**

10. Number of Teaching posts sanctioned and filled

	Sanctioned	Filled	Actual ( Including CAS and MPS)
Professors	03	02	02
Associate Professors	6	04	04
Assistant Professors	12	24	24
Others	--	10	10

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance :

S. No	Name of Teacher	Qualification	Designation	Area of Specialization	Experience	No. of Ph.D/ M-Tech/ MSc. students guided
1)	Dr. R.K. Sharma	Ph. D.	PROFESSOR	Statistical Computing, Pattern Recognition, NLP	23 years	PhD: 10 M-Tech: 25, MSc: 4
2)	Dr. S.S. Bhatia	Ph. D.	PROFESSOR	Functional Analysis	28 years	PhD:10 MSc: 7
3)	Dr. Rajesh Kumar	Ph. D.	ASSOCIATE PROFESSOR & HEAD	Software Engineering, Cloud Computing	19 Years	PhD: 6 MTech: 09 MSc: 07
4)	Dr. A.K. Lal	Ph. D.	ASSOCIATE PROFESSOR	Applied Mathematics (Theoretical Astrophysics, Reliability and Numerical Analysis)	20 years	PhD: 6 M.Sc.: 11 M.Phil: 01
5)	Dr. Mahesh Kumar Sharma	Ph. D.	ASSOCIATE PROFESSOR	Astrophysics, Operations Research	16 years	PhD: 4 MSc: 20
6)	Dr. Deepak Gumber	Ph. D.	ASSOCIATE PROFESSOR	Algebra	13 years	PhD: 1 MSc: 5
7)	Dr. Rajesh kumar Gupta	Ph. D.	ASSISTANT PROFESSOR	Differential Equations	11.5 years	PhD: 6, MSc:11

S. No	Name of Teacher	Qualification	Designation	Area of Specialization	Experience	No. of Ph.D/ M-Tech/ MSc. students guided
8)	Dr. Rajiv Kumar	Ph. D.	ASSISTANT PROFESSOR	Component Based Software Development, Software Engineering, Algorithm Analysis and Design	17 years	MSc: 3 MTech: 7
9)	Dr. Singara Singh	M.Tech. (CSE) Ph. D.	ASSISTANT PROFESSOR	Data Compression, Information Security	14.3 years	MTech/MSc : 14
10)	Dr. Meenakshi Rana	Ph. D.	ASSISTANT PROFESSOR	Partition Theory	10.8 years	MSc: 6
11)	Dr. Maninder Kaur	M. Tech.	ASSISTANT PROFESSOR	VLSI physical design Automation, Evolutionary algorithms, Swarm Intelligence,	13.5 years	MTech: 5
12)	Ms. Vineeta Bassi	M.E.	ASSISTANT PROFESSOR	Software Engineering	11 years	MTech: 6
13)	Dr. Amit Kumar	Ph. D.	ASSISTANT PROFESSOR	Operations Research	7.5 years	PhD: 9 MTech/MSc : 11
14)	Dr. Satish Kumar Sharma	Ph. D.	ASSISTANT PROFESSOR	Elasticity	17 years	MSc: 10
15)	Dr. Rupali Bhardwaj	Ph. D.	ASSISTANT PROFESSOR	Cellular Automaton	15 years	NIL
16)	Dr. Ankush Pathania	Ph. D. Post-doc	ASSISTANT PROFESSOR	Numerical Astrophysics	5.5 years	MSc:3
17)	Ms. Sanmeet Kaur	M.E.	ASSISTANT PROFESSOR	Network Security, Software Engineering	13 years	MTech: 11
18)	Ms. Sunita Garhwal	M. Tech.	ASSISTANT PROFESSOR	Theory of Computation, Software Engineering	7 years	MTech: 9
19)	Dr. Vivek	Ph. D.	ASSISTANT PROFESSOR	Numerical Analysis	3 years	MSc: 3
20)	Dr. Jatinderdeep Kaur	Ph. D.	ASSISTANT PROFESSOR	Fourier Analysis, Fixed Point Theory	8 years	PhD: 1 MSc: 6
21)	Dr. Sanjeev Kumar	Ph. D.	ASSISTANT PROFESSOR	Numerical Analysis	11 years	NIL
22)	Dr. Sharad Saxena	Ph. D.	ASSISTANT PROFESSOR	Networks	12 years	M.Tech: 2
23)	Dr. Paramjeet Singh	Ph. D.	ASSISTANT PROFESSOR	Numerical analysis of PDE	2.5 years	MSc: 1
24)	Dr. Vikas	Ph. D.	LECTURER	Operation Research/Mathematical Programming	7 years	MSC: 1
25)	Dr. Hatish Garg	Ph.D., M.Sc. (Mathematics)	Lecturer	Reliability Theory, Fuzzy optimization, Optimization Technique	1.5 years	NIL

S. No	Name of Teacher	Qualification	Designation	Area of Specialization	Experience	No. of Ph.D/ M-Tech/ MSc. students guided
26)	Dr. Mohammad Salahuddin Khan	PhD	ASSISTANT PROFESSOR	Ring Theory	0.6 years	Nil
27)	Dr. Rajesh Kr. Sharma	M.Sc., M.Tech., Ph.D.	ASSISTANT PROFESSOR	Fluid Dynamics	4 years	Nil
28)	Dr. Raj Nandkeolyar	Ph. D.	ASSISTANT PROFESSOR	Fluid Dynamics, Heat Transfer, Numerical Methods	04 Years	01
29)	Dr. Sachin Kumar	PhD	ASSISTANT PROFESSOR	Partial Differential Equations	3 year	Nil
30)	Dr. Anil Gaur	PhD	ASSISTANT PROFESSOR	Nonparametric Statistical Inference	0.6 years	Nil
31)	Dr. Anju Sharma	Ph. D.	LECTURER	Grid Computing/ Cloud Computing	6.8 years	M.Tech: 4
32)	Ms. Anshu Singla	MCA, PhD (Pursuing)	LECTURER	MCA	11 years	NIL
33)	Ms. Pratima Singla	MCA, PhD (Pursuing)	LECTURER	Computer Networks	9.5 years	NIL
34)	Ms. Geeta Kasana	MCA, PhD (Pursuing)	LECTURER	Information Security	7 years	MSc: 1
35)	Ms. Palika Chopra	MCA, Ph.D. (Pursuing)	Lecturer Contractual	Neural Computing Techniques	8 years	NIL
36)	Mr .Gurpal Singh Chhabra	M. Tech., PhD (Pursuing)	LECTURER	Software Engineering	6 years	MTech: 05
37)	Mr. Pritpal Singh	MCA, PhD (Pursuing)	LECTURER	SOFT COMPUTING	1.5 years	M.Tech: 2
38)	Mr. Shatrughan Modi	M.E (Software Engg.), PhD (Pursuing)	LECTURER	Software Engineering	3 years	NIL
39)	Dr. Taskeen Zaidi	Ph.D., M.Sc. (Computer Science)	Lecturer	Distributed Computer Networking and Object-Oriented Modeling	1.5 years	NIL
40)	Dr. Navdeep Kailey	Ph.D. (Optimization)	Lecturer	Duality Theory, Nonlinear Programming, Multiobjective Programming Problems	4 Years	Nil

11. List of senior Visiting Fellows, adjunct faculty, emeritus professors : Nil
12. Percentage of classes taken by temporary faculty – programme-wise information : Nil
13. Programme-wise Student Teacher Ratio :

M.Tech. (CSA) :	15:1
MCA	21:1
M.Sc.(Math & Comp.)	8:1

14. Research thrust areas as recognized by major funding agencies :  
**Reliability, availability and maintainability (RAM); Fuzzy Reliability; Development of OHWR for Indian Languages; Cloud computing; L-1 convergence of trigonometric series.**

15. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise:

Ongoing Sponsored Projects:

S. No	Name of project	Year of sanction	Funding agency	Project cost (lacs)	Principal investigator
1	Algorithms for solving some single and multi criteria decision making problems in Fuzzy environment	2010	UGC	10.01	Dr. M. K. Sharma
2	Development of Indradhanush: In integrated wordnet for Bengali,...., Punjabi and Urdu	2010	MoCIT	17.55	Dr. R. K. Sharma
3	Development of OHWR for Indian Languages- Phase II	2010	MoCIT	60.23	Dr. R. K. Sharma & Dr. Rajesh Kumar
4	Development of prosodically guided phonetic engine for searching speech database in Indian languages	2011	MoCIT	30.015	Dr. R. K. Sharma
5	Green cloud computing framework for efficient and robust management of Resources	2012	UGC	12.92	Dr. Anju Sharma Dr. Rajesh Kumar
6	L-1 convergence of trigonometric series	2013	UGC	9.72	Dr. Jatinderdeep Kaur Dr. S. S. Bhatia
7	Automorphisms of finite p-groups	2013	UGC	3	Dr. Deepak Gumber
8	Application software development to evaluate thermal performance of tube type, air to air heat exchangers for caca high rated electrical motors	2013	Crompton Greaves, Mumbai	13.50	Dr. Gangacharyulu Dr. Rajiv Kumar

S. No	Name of project	Year of sanction	Funding agency	Project cost (lacs)	Principal investigator
9	Design and Implementation of Digital Watermarking Techniques through Random Number Generator using Cellular Automata	2014	Thapar Institute of Engineering & Technology University	2.30	Dr. Rupali Bhardwaj
10	Finite volume approximations of conservation laws arising in neuronal variability	2014	Thapar Institute of Engineering & Technology University	3.26	Dr. Paramjeet Singh
11	Finding Energy Efficient Acoustic Communication in 3D Underwater Sensor Networks	2014	Thapar Institute of Engineering & Technology University	4.39	Dr. Sharad Saxena

16. Inter-institutional collaborative projects and associated grants received a) National collaboration b) International collaboration: NIL

17. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received:

S. No.	Project Title	Funding Agency	Duration	Grant (Rs. Lakhs)	Principal Investigator
1	Algorithms for solving some fuzzy network flow problems	U.G.C	2011-13	10.068	Dr. Amit Kumar
2	Reliability, Availability and Maintainability (RAM) Analysis of Industrial Process	UGC (Major)	2009-2012	9.085	Dr. A. K. Lal
3	Development of WordNet for Punjabi	MoCIT	2010	17.55	Dr. R.K.Sharma
4	Numerical Analysis of Structures and Oscillations of Rotating Stars	UGC (Major)	2006-2008	0.9	Dr. M. K. Sharma Dr. A. K. Lal (Co-PI)

5	Mathematical Modeling of Structures and Oscillations of stellar Systems in the Rotating Frame of Reference	UGC (Major)	2003-2006	3.59	Dr. A. K. Lal
6	RC-ILTS (Punjabi)	MoCIT	2000-2004	88.8	Dr. R.K.Sharma
7	Eigenfrequencies of Differentially Rotating White Dwarf Stars	UGC (Minor)	2001-2002	0.06	Dr. A. K. Lal
8	On mixing-type estimators	UGC	1999-2000	0.12	Dr. R.K.Sharma
9	Project Impact-SSS	MoCIT	1998-2002	8.0 lakhs per year	Dr. R.K.Sharma
10	Website Development for PSEB	PSEB	2000-2001	0.87 lakhs	Dr. R.K.Sharma

18. Research facility / centre with state recognition national recognition international recognition :

**Our faculty and students are using latest hardware and software for their research work.**

19. Special research laboratories sponsored by / created by industry or corporate bodies : NO

20 Publications:

**List of research publications in SCI Journals year 2014-15**

S.N.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
1.	Efficient Feature Extraction Techniques for Offline Handwritten Gurmukhi Character Recognition	National Academy Science Letters, 37(4), 381-91, 2014	Munish Kumar, R. K. Sharma and M. K. Jindal	0.24
2.	A Novel Hierarchical Technique for Offline Handwritten Gurmukhi Character Recognition	National Academy Science Letters, 37(6), 567-72, 2014	Munish Kumar, R. K. Sharma and M. K. Jindal	0.24
3.	Symmetry Analysis and Some Solutions of Gowdy Equation	Romanian Journal of Physics 60 (2015) 15 – 21	Rajeev, R.K. Gupta and S. S. Bhatia	0.745
4.	Exact and Numerical Solutions of Coupled Short Pulse Equation with Time Dependent Coefficients	Nonlinear Dynamics 79 (2015) 455 – 464	R.K. Gupta Vikas Kumar and Ram Jiwari	2.419
5.	Painleve Analysis and Some Solutions of Variable Coefficients Benny Equation	Parmana-Journal of Physics, Accepted	Rajeev, R.K. Gupta and S. S. Bhatia	0.72

S.N.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
6.	Lie Symmetry Analysis and Exact Solutions for a Variable Coefficient Generalized Kuramoto-Sivashinsky Equation	Romanian Reports in Physics 66 (2014) 923 – 928	Rajeev, R.K. Gupta and S. S. Bhatia	1.137
7.	Recognition of Multi-Stroke Based Online Handwritten Gurmukhi Aksharas	Proceedings of the National Academy of Sciences, India Section A: Physical Sciences, Online: <a href="http://link.springer.com/article/10.1007/s40010-014-0183-z">http://link.springer.com/article/10.1007/s40010-014-0183-z</a> , 2014	Ravinder Kumar, R. K. Sharma and Anuj Sharma	0
8.	A new class of distribution-free tests for testing ordered location parameters based on sub-samples	Statistics and Probability Letters, 90 (2014) 53-59	Anil Gaur	0.669
9.	A class of integer linear fractional programming problems	Optimization, 63 (10) 1565-1581, 2014	Vikas Sharma, Kalpana Dahiya, Vanita Verma	0.707
10.	Linear programming approach for solving fuzzy critical path problems with fuzzy parameters	Applied Soft Computing, Vol. 21, pp. 309-319, 2014	Parmpreet Kaur and Amit Kumar	2.679
11.	Mehar methods for fuzzy optimal solution and sensitivity analysis of fuzzy linear programming with symmetric trapezoidal fuzzy numbers	Mathematical Problems in Engineering, Vol. 2014, Article ID 697085, 8 pages, doi:10.1155/2014/697085	Sukhpreet Kaur, Amit Kumar and S.S. Appadoo	1.082
12.	A note on “A methodology for matrix games with payoffs of triangular intuitionistic fuzzy number”	Journal of Intelligent and Fuzzy Systems, Vol. 27, pp. 1689-1691, 2014	Tina Verma and Amit Kumar	0.936
13.	Fuzzy optimal solution of fully fuzzy linear programming problems using ranking function	Journal of Intelligent and Fuzzy Systems, Vol. 26, pp. 337-344, 2014	Amit Kumar and Jagdeep Kaur	0.936
14.	Optimal way of selecting cities and conveyances for supplying coal in uncertain environment	Sadhana - Academy Proceedings in Engineering Sciences, Vol. 39, pp. 165-187, 2014	Amit Kumar and Amarpreet Kaur	0.587
15.	A new method for solving single and multi-objective fuzzy minimum cost flow problems with different membership functions	Sadhana - Academy Proceedings in Engineering Sciences, Vol. 39, pp. 189-206 , 2014	Amit Kumar and Manjot Kaur	0.587



S.N.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
16.	A method for unbalanced transportation problems in fuzzy environment	Sadhana - Academy Proceedings in Engineering Sciences, Vol. 39, pp. 573-581, 2014	Deepika Rani, T.R. Gulati and Amit Kumar	0.587
17.	A note on the paper "A simplified novel technique for solving fully fuzzy linear programming problems"	Journal of Optimization Theory and Applications, Vol. 163, pp. 685-696, 2014	Bindu Bhardwaj and Amit Kumar	1.406
18.	An approach for analyzing the reliability of industrial system using fuzzy Kolmogorov's differential equations,	The Arabian Journal for Science and Engineering, 40(3), 975 - 987, 2015, Springer.	Harish Garg	0.367
19.	Analyzing the behavior of an industrial system using fuzzy confidence interval based methodology	National Academy Science Letters, 37(4), 359 - 370, 2014, Springer	Harish Garg	0.240
20.	A novel approach for analyzing the behavior of industrial systems using weakest t-norm and intuitionistic fuzzy set theory,	ISA Transaction, 53, 1199 - 1208, 2014, Elsevier	Harish Garg	2.256
21.	Performance and behavior analysis of repairable industrial systems using Vague Lambda-Tau methodology	Applied Soft Computing, 22, 323 - 338, 2014, Elsevier	Harish Garg	2.679
22.	Bi-objective optimization of the reliability-redundancy allocation problem for series-parallel system	Journal of Manufacturing Systems, 33(2), 353 - 367, 2014, Elsevier	Harish Garg, Monica Rani, S.P. Sharma and Yashi Vishwakarma	1.847
23.	Reliability, availability and maintainability analysis of industrial systems using PSO and fuzzy approach	MAPAN - Journal of Metrology Society of India, 29(2), 115 - 129, 2014, Springer.	Harish Garg	0.477
24.	An approach for analyzing the reliability of industrial systems using soft computing based technique	Expert systems with Applications, 41(2), 489 - 501, 2014, Elsevier.	Harish Garg, Monica Rani and S.P. Sharma	1.965
25.	Performance analysis of industrial systems using artificial bee colony and fuzzy methodology	International Journal of Artificial Intelligence and tools, 23 (5), 1450008 (23 pages), 2014, World Scientific	Harish Garg, Monica Rani and S.P. Sharma	0.321

S.N.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
26.	Cost minimization of butter-oil processing plant using artificial bee colony technique	Mathematics and Computers in Simulations, 97C, 94 - 107, 2014, Elsevier.	Monica Rani, Harish Garg, S.P. Sharma	0.856
27.	“PUNJARPabet: A New Phonetic Alphabet for Speech Processing in the Punjabi Language	Journal of Circuits, Systems, and Computers, WorldScientificPublishing Co.; JCSC Vol. 23, No. 5 (June 2014	Surinder Dhanjal & Satvinder Singh Bhatia	0
28.	Generalized Sequence Spaces in 2-Normed Spaces Defined by Ideal and a Modulus Function,	Accepted Annals of the Alexandru Ioan Cuza University - Mathematics, DOI: <a href="https://doi.org/10.2478/aicu-2014-0024">10.2478/aicu-2014-0024</a> , July 2014	<a href="#">Sudhir Kumar<sup>1</sup></a> <a href="#">Vijay Kumar<sup>1</sup> S.S. Bhatia</a>	0
29.	Generalized sequential convergence in fuzzy neighborhood spaces	accepted for publication in National Academy Science Letters, 2014	Pankaj Kumar, S.S. Bhatia, V. Kumar	0.24
30.	The role of screening and treatment in the transmission dynamics of HIV/AIDS and tuberculosis co-infection: a mathematical study	J Biol Phys, DOI 10.1007/s10867-014-9342-3, (Jan 2014)	Navjot Kaur · Mini Ghosh · S. S. Bhatia	1.152
31.	Forecasting stock index price based on M-factors fuzzy time series and particle swarm optimization	International Journal of Approximate Reasoning (Elsevier), 55, 812-833, 2014.	Pritpal Singh and Bhogeswar Borah	1.729
32.	UML Modeling and Validation of Object-Oriented Database for Water Bill Deposit System	MAGNT Research Report (SCI Indexed (ISSN No.: 1444-8939), Vol 2(5), 100-104, DOI: <a href="https://dx.doi.org/14.9831/1444-8939.2014/2-5/MAGNT.13">dx.doi.org/14.9831/1444-8939.2014/2-5/MAGNT.13</a> , Sept., (2014).	Zaidi, Taskeen, Saxena, Vipin and Sudhir Kumar Singh	0.68
33.	“Modeling and Validation of Light Dependent Reaction of Photosynthesis”	Wulfenia journal, Klagenfurt, Austria, Vol.2 2, No.1; Jan, 2015	Zaidi Taskeen	0.267
34.	Modeling for Minimization of Loneliness of People on the Social Networking Websites)	(Accepted to be appeared in March, 2015, Journal of Psychiatry	Zaidi Taskeen, Saxena Vipin	0.871
35.	Four-Way Combinatorial Interpretations Of Some Rogers-Ramanujan Type Identities	<a href="#">Ars -Combinatoria, 2014, (Accepted)</a>	J. K. Sareen And M. Rana	0.268

S.N.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
36.	Coincidence and Common Fixed Point Results For Generalized $\alpha$ - $\psi$ Contractive Type Mappings With Applications	Bulletin of the Belgian Mathematical Society Simon Stevin accepted	Priya Shahi, Jatinderdeep Kaur, S.S. Bhatia	I.F. 0.36
37.	Integrability and L1-convergence of fuzzy Trigonometric series with special fuzzy coefficients	Journal of Non- Linear Science and Applications, in Press	Sandeep Kaur and Jatinderdeep Kaur	1.0756
38.	Generalized $(\xi, \alpha)$ -expansive mappings and related fixed-point theorems	Journal of Inequalities and Applications.2014, 2014:22	Erdal Karapınar, Priya Shahi, Jatinderdeep Kaur, S.S. Bhatia,	0.77
39.	Common Fixed Points of Expansive Mappings in Generalized Metric Spaces,	Journal of Applied Research and Technology,12(3), 2014,607-614.	Priya Shahi, Jatinderdeep Kaur, S.S. Bhatia,	0.44
40.	Reducing Mutation Testing Endeavor using the Similar Conditions for the same Mutation Operators Occurs at Different Locations	Appl. Math. Inf. Sci. 8, 2389-2393, 2014	T. Singla, A. Kumar, S. Garhwal	1.23
41.	Temperature Predictive Technique for workload Scheduling in Green Clouds	The Scientific world Journal, 2014, pp. 1-10	Rajesh Kumar Supriya Kinger, Anju Sharma	1.219
42.	Efficient Dynamic Replication Algorithm using Agents in Data Grids	The Scientific world Journal , 2014, pp.1-10	Rajesh Kuma Priyanka Vashisht, Anju Sharma	1.219
43.	Fuzzy Entropy based Framework for Multi-Faceted Test Case Classification and Selection: An Empirical Study"	IET Software, Volume 8, Issue 3, June 2014, pp. 103 - 112	Rajesh Kumar Manoj Kumar, Arun Sharma,	0.536
44.	A Cooperative Network Framework for Multi-UAV Guided Ground Ad Hoc Networks,	Journal of intelligent and Robotic Systems, Volume 77, Issue 3-4, March 2015, pp. 629-652, 2015.	Rajesh Kumar, Vishal Sharma	0.81
45.	Estimation-Based Queue Scheduling Model to Improve QoS for End Users in MANETs",	Computing and Informatics ( IF 0.30)(In Press.).	Rajesh Kumar, Vishal Sharma	0.319
46.	Dimensions and equilibrium structures of the primary components of the nonsynchronous binary systems	New Astronomy (NA), 26, 1-11, 2014	Pathania, A and Medupe, T	1.244

**List of research publications in Non-SCI Journals (2014-2015)**

<b>S. N.</b>	<b>Title of the paper</b>	<b>Name of the Journal with volume, page nos., year</b>	<b>Name of the authors</b>
1.	Viscous dissipation and Newtonian heating effects on free non-linear convection in a nanofluid saturated porous media	Open Journal of Heat, Mass & Momentum Transfer, 2(3) (2014) 87-97	R. Nandkeolyar, A Sutradhar, P VSN Murthy, P Sibanda
2.	Dynamic task allocation in distributed computing systems by heuristic algorithms	Int. J. of Operational Research. 21 (4), 391-408, 2014.	Deepak Garg and Paramjeet Singh
3.	Finite volume approximations for size structured neuron model	To appear in "Differential Equations and Dynamical Systems"	Paramjeet Singh and Santosh Kumar
4.	Fuzzy Approach for Component Selection and Classification: An Empirical Study	Research Journal of Applied Sciences, Engineering and Technology (RJASET), Volume 7(9) March 2014, pp. 1832-1836	Rajesh Kumar Vinay, Manoj Kumar Pachariya, Prashant Johari
5.	Service-Oriented Middleware for Multi-UAV Guided Ad Hoc Networks	IT Convergence Practice, volume 2(3), pp. 24-33, 2014	Rajesh Kumar, Vishal Sharma
6.	Energy Efficient Routing Protocol For Manets	i-manager's Journal on Information Technology, Volume 3(3), June-Aug 2014, pp. 40-52	Rajesh Kumar, Shivam Kapoor
7.	A Cuckoo Search based Approach for Solving Standard Cell Placement Problem	Journal of VLSI Design Tools & Technology (4)2, 1-7, 2014	Maninder Kaur, Amanpreet Singh.
7.	"Regression Models for the Prediction of Compressive Strength of Concrete with & without Fly ash"	International Journal of Latest Trends in Engineering and Technology (IJLTET), Vol. 3 Issue 4 March 2014/page no. 400-406	Palika Chopra Dr.R.K.Sharma Dr.Maneek Kumar
8.	PREDICTING COMPRESSIVE STRENGTH OF CONCRETE FOR VARYING WORKABILITY USING REGRESSION MODELS	International Journal of Engineering & Applied Sciences (IJEAS) Vol.6, Issue 4(2014)/page no. 10-22	Palika Chopra Dr.R.K.Sharma Dr.Maneek Kumar
9.	"A Distributed Load Balancing Scheme Based On Complex Network Model of Cloud Servers"	ACM SIGSOFT (ISSN No.: 0163-5948), USA, Vol. 39(6), Nov. (2014) doi:10.1145/2674632.2674639.	Narander Kumar, Shalini Agarwal, Zaidi, Taskeen and Saxena, Vipin
10.	A Validation Technique for UML Activity Mode	"Accepted for Publication" in International Journal of Computer Applications (IJCA) March 2015 Edition.	Sudhir Kumar Singh, Taskeen Zaidi and Vipin Saxena
11.	Modified Single Pass Clustering with Variable Threshold Approach	International Journal of Innovative Computing, Information and Control, 11(1), 375-86, 2015	Mamta Mittal, R. K. Sharma and V. P. Singh

S. N.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
12.	Validation of k-means and threshold based clustering methods	International Journal of Advancements in Technology, 5(2), 153-60, 2014	Mamta Mittal, R. K. Sharma and V. P. Singh
13.	Predicting gender using Iris images	Research Journal of Recent Sciences, 3(4), 20-26, 2014	A. Bansal, R. Agrawal and R. K. Sharma
14.	Segmentation of isolated and touching characters in offline handwritten Gurmukhi script documents	I.J. Information Technology and Computer Science, 02, 58-63, 2014, DOI: 10.5815/ijitcs.2014.02.08	Munish Kumar, M.K. Jindal and R.K. Sharma
15.	A Proactive Technique for Automatic Detection and Signature Generation for Zero Day HTTP Attacks on Web Server of an Educational Institute	Computer Fraud & Security, Elsevier, Feb 2015.	Sanmeet Kaur and Maninder Singh,
16.	On Ideal Version of Lacunary Statistical Convergence of Double Sequences	Gen. Math. Notes, Vol. 17, No. 1, July, 2013, pp.32-44	Sudhir Kumar, Vijay Kumar and S.S. Bhatia
17.	Mathematical Analysis of the Transmission Dynamics of HIV/AIDS: Role of Female Sex Workers	Appl. Math. Inf. Sci. 8, No. 5, 1-11 (2014)	Navjot Kaur, Mini Ghosh and S.S. Bhatia
18.	I and I* convergence of multiple sequences of fuzzy numbers	accepted for publication in Boletim da sociedade Paranaense de Matematica, 2014	Pankaj Kumar, V. Kumar, S.S. Bhatia
19.	On $\lambda$ -statistical Limit inferior and Limit superior of order $\beta$ for Sequences of Fuzzy Numbers	accepted for publication in General Mathematical Notes, 2014	Pankaj Kumar, S.S. Bhatia, V. Kumar
20.	A note on $\lambda$ -statistical Limit Inferior and Limit Superior for Sequences of Fuzzy Numbers	accepted in Pure and Applied Mathematics Letters, 2014	Pankaj Kumar, S.S. Bhatia
21.	Some New Difference Sequence Spaces of Invariant Means Defined by Ideal and Modulus Function	International Journal of Analysis, Volume 2014, Article ID 631301, 7 pages, <a href="http://dx.doi.org/10.1155/2014/631301">http://dx.doi.org/10.1155/2014/631301</a>	Sudhir Kumar, Vijay Kumar, and S. S. Bhatia
22.	Lacunary strongly almost summable sequence Spaces	Acta Universitatis Apulensis, No. 39/2014, pp. 1-10	S. Kumar, S. S. Bhatia, V. Kumar
23.	"Reliability based design optimization of concrete mix proportions using generalized ridge regression model",	International Journal of Science and Engineering , Vol.8(1), 2015.	Rachna Aggarwal, M.K. Sharma, R.K. Sharma and Maneek Kumar,
24.	Second order slip flow of Cu-Water nanofluid over a stretching sheet with heat transfer	WSEAS Transaction on Fluid Mechanics, 9 (2014) 26-34	Rajesh Sharma, Anuar Ishak
25.	Steady Fluid Flow and Heat Transfer Over an Exponentially Shrinking Sheet with Partial Slip	AIP Conf. Proc., 1602 (2014) 260-265	Rajesh Sharma, Anuar Ishak, Ioan Pop

**Publication of papers in conferences 2014-2015**

<b>S. No.</b>	<b>Title of the paper</b>	<b>Name of the conference with venue, date and year, page nos.</b>	<b>Name of the authors</b>
1.	An improved genetic based Routing Protocol for VANETs	Confluence The Next Generation Information Technology Summit (Confluence), 2014 5th International Conference-. IEEE, 2014, pp. 347 - 353.	Rajesh Kumar , Divya Gupta
2.	"Enhanced swarm intelligence-based scheduler to improve QoS for MANETs	Confluence The Next Generation Information Technology Summit (Confluence), 2014 5th International Conference-. IEEE, 2014, pp. 340 - 346	Rajesh Kumar, Priya Sharma
3.	Efficient Scheduling Algorithm based on Priority Scheduling Mechanism in Cloud Environment.	ICCC-2014, Dec. 27-28, Odisha. (Accepted for publication in IEEE)	Jyoti Kumari, Anju Sharma
4.	A Context Sensitive Thresholding Technique for Automatic Image Segmentation	ICCIDM 2014 Conference, VSSUT, Odhisa, India, December 20-21(2014),Computational Intelligence in Data Mining - Volume 2,Smart Innovation, Systems and Technologies Volume 32, 2015, pp 19-25	Anshu Singla, Swarnajyoti Patra
5.	Offline Handwritten Gurmukhi Character Recognition System using RBF-SVM	International Workshop on Document Analysis and Recognition, IISc, Bangalore, 14 DEC 2014 (Accepted for publications in ACM Digital Library).	Munish Kumar, M. K. Jindal and R. K. Sharma
6.	Performance analysis of zone based features for online handwritten Gurmukhi script recognition using support vector machine	In Proc: Progress in Systems Engineering Advances in Intelligent Systems and Computing Volume 330, 747-753, August 2014	Karun Verma and R. K. Sharma
7.	Mobile agent information security in ad-hoc network	April 2014, doi: 10.1109/ICCPEIC.2014.6915343 (IEEE), pp.77-80,	Jasleen Kaur, Sharad Saxena, Anu Jain
8.	Securing mobile agent's information in ad-hoc network	Sept 25-26, 2014, doi: 10.1109/CONFLUENCE.2014.6949352 pp. 442-446, (IEEE)	Jasleen Kaur, Sharad Saxena, Mohd Abuzar Sayeed
9.	Data agglomeration in wireless sensor networks	Dec 11-13, 2014, International Conference on Parallel, Distributed and Grid Computing (PDGC), 2014, pp.285-289 (IEEE).	Sandhu Jasminder Kaur, Saxena Sharad
10.	Challenges and issues in underwater acoustics sensor networks: A review	Dec 11-13, 2014, International Conference on Parallel, Distributed and Grid Computing (PDGC), pp. 251-255 (IEEE).	Jindal Himanshu, Saxena Sharad, Singh Singara
11.	Acoustic communication characteristics in UWDBCSN	Dec 11-13, 2014, International Conference on Parallel, Distributed and Grid Computing (PDGC), pp. 176-180 (IEEE).	Saxena Sharad, Mehta Deepak, Kaur Jasminder, Jindal Himanshu

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
12.	“Modeling and Performance Estimation of Static Step Topology Under Distributed Environment”	In Proceedings of 101 <sup>th</sup> Indian Science Congress 2014 Held on Feb. 3-7, 2013, University of Jammua, Jammu, India.	Zaidi Taskeen
13.	Implementation of Bankers’ Algorithm for Avoidance of Deadlock Across National Knowledge Network (NKN) through UML	In Proceedings of International Conference of the 8 <sup>th</sup> INDIACOM on Computing for Sustainable Global Development, (ISBN 978-93-80544-06-9), PP. 745-747, Organised by Bharti Vidyapeeth Institute of Computer Application and Management, New Delhi from 5-7 <sup>th</sup> March 2014	Zaidi Taskeen, Saxena Vipin
14.	Necessary and Sufficient condition for L1-convergence of certain sine sums,	international Conference on Special Functions and their Applications Thapar Institute of Engineering & Technology University, Patiala, 2014 , 27	Sandeep Kaur and Jatinderdeep Kaur
15.	Fixed Point Theorems for $\alpha$ - $\psi$ - contractive mappings,	International Conference on Special Functions and their Applications Thapar Institute of Engineering & Technology University, Patiala, 2014 , 24	Kapil Chawla and Jatinderdeep Kaur.
16.	Rational type in complex valued metric spaces with applications,	International Conference on Special Functions and their Applications Thapar Institute of Engineering & Technology University, Patiala, 2014 , 26.	Priya Shahi, Jatinderdeep Kaur and S.S. Bhatia
17.	Lebesgue Integrability of Fuzzy Trigonometric Sine Series	International Conference on Mathematical Sciences, Sathyabama University, Chennai, 2014, 491-494	Sandeep Kaur and Jatinderdeep Kaur
18.	Analysis of various direction lifting schemes for JPEG2000 Standard	IEEE International Conference on Recent Advances and Innovations in Engineering, Jaipur, May 9-11, 2014, pp 1-6	Chirag Garg and Singara Singh Kasana
19.	Challenges and Issues in Underwater Acoustics Sensor Networks: a review	IEEE International Conference on Parallel, Distributed and Grid Computing, Solan (HP), 16-17 Dec 2014, pp 251-255	Himanshu Jindal, Sharad Saxena, Singara Singh Kasana
20.	A Novel Image Zooming Technique Using Wavelet Coefficients	International Conference on Recent Cognizance in Wireless Communication & Image Processing, Jaipur, 16-17 Jan, 2015	Himanshu Jindal, Singara Singh Kasana, Sharad Saxena

**List of research publications in SCI Journals year 2013-14**

S. No.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
1	Painlevé Analysis, Lie Symmetries and Exact Solutions for Variable Coefficients Benjamin-Bona-Mahony-Burger (BBMB) Equation	<i>Communication in Theoretical Physics</i> 60 (2013) 175-182	Vikas Kumar, R.K. Gupta and Ram Jiwari	.954

S. No.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
2	On Certain New Exact Solutions of Einstein Equations for Axisymmetric Rotating Fields	<i>Chinese Physics B</i> 22 (2013) 100203 (6pp)	Lakhveer Kaur and R.K. Gupta	1.148
3	Dynamics of internal waves in a stratified ocean modeled by the extended Gardner equation with time-dependent coefficients	<i>Ocean Engineering</i> 70 (2013) 81 -87	Sachin Kumar, K. Singh and R.K. Gupta	1.161
4	Lie Group Analysis, Numerical and Non-Traveling Wave Solutions for the (2+1)-Dimensional Diffusion-Advection Equation with Variable Coefficient	<i>Chinese Physics B</i> , 23 (2014) 030201 (6pp).	Vikas Kumar, R.K. Gupta and Ram Jiwari	1.148
5	Some Invariant Solutions of Field Equations with Axial Symmetry for Empty Space Containing an Electrostatic Field	<i>Applied Mathematics and Computation</i> , 231 (2014) 560-565	Lakhveer Kaur and R.K. Gupta	1.349
6	Equilibrium Structure of Rotationally and Tidally Distorted Prasad Model including the Effect of Mass Variation inside the Stars	<i>Astrophysics</i> (translation of Russian language journal <i>Astrofizika</i> ), Vol. 57, No. 1, 129-138, 2014	Sunil Kumar, A. K. Lal, Seema Saini	0.336
7	A common fixed point theorem for two weakly compatible pairs in G-metric spaces using the property E.A	<i>Fixed point theory and Applications</i> , 41 (2013)	Manro S., Bhatia, S.S., Kumar, S. and Vetro, C	1.87
8	Non existence of totally contact umbilical slant lightlike submanifolds of indefinite Sasakian manifolds	<i>Bulletin of the Iranian Mathematical Society</i> . (Accepted)	Rashmi Sachdeva, Rakesh Kumar, S. S. Bhatia	0.223
9	Numerical Solution of Stochastic Partial differential difference equation arising in reliability engineering	<i>Applied Mathematics and Computation</i> , 219(14) : 7645:7652, 2013.	Manwinder Kaur, Arvind Kumar Lal, S. S. Bhatia and A.S. Reddy	1.349
10	Generalized $(\xi, \alpha)$ -expansive mappings and related fixed-point theorems	<i>Journal of Inequalities and Applications</i> 2014, 2014:22	Erdal Karapinar, Priya Shahi, Jatinderdeep Kaur and S. S. Bhaia	0.82



S. No.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
11	Velocity dispersion an elastic plate with microstructure: effects of characteristic length in a couple stress model	Meccanica DOI 10.1007/s11012-013/9854-0 2013	Vikas Sharma and Satish Kumar Sharma	1.747
12	A new method for sensitivity analysis of fuzzy transportation problems	Journal of Intelligent and Fuzzy Systems, Vol. 25, pp. 167-175, 2013	Neha Bhatia and Amit Kumar	0.788
13	Linear programming approach to find the exact solution of fully fuzzy linear systems with arbitrary fuzzy coefficients	Journal of Intelligent and Fuzzy Systems, Vol. 25, pp. 747-753, 2013	Neetu, Amit Kumar and Abhinav Bansal	0.788
14	Modification in Chen and Tsai's method for solving time-cost trade-off problems of project networks in fuzzy environments	Neural Computing & Applications, Vol. 23, pp. 1045-1050, 2013	Parmpreet Kaur and Amit Kumar	1.168
15	A new ranking approach for intuitionistic fuzzy numbers and its application	Journal of Applied Research and Technology. Vol. 11, pp. 381-396, 2013	Amit Kumar and Manjot Kaur	0.353
16	General form of linear programming problems with fuzzy parameters	Journal of Applied Research and Technology, Vol. 11, pp. 629-635, 2013	Amit Kumar and Jagdeep Kaur	0.353
17	Temperature Predictive Technique for workload scheduling in Green Clouds	The Scientific journal, January 2014	Supriya kinger, Rajesh Kumar, Anju Sharma	1.73
18	Efficient Dynamic Replication Algorithm using Agents in Data Grids	The Scientific journal. January 2014	Priyanka Sharma, Rajesh Kumar, Anju Sharma	1.73
19	Dimensions and equilibrium structures of the primary components of the nonsynchronous binary system	New Astronomy, 26, 1-11, 2014	Pathania, A and Medupe, T	1.85
20	A Novel Classification Technique Based on Progress Transductive SVM Learning	Pattern Recognition Letters, 2014	Anshu Singla, Swarnajyoti Patra, Lorenzo Bruzzone	1.266
21	Fixed Point Theorems for Mappings of Integral Type with Applications	Accepted in Journal of Nonlinear and Convex Analysis	Priya Shahi, Jatinderdeep Kaur and S. S. Bhatia	0.976
22	Some applications of augmentation quotients	Hacettepe Journal of Mathematics and Statistics, Vol. 42, 627-631, 2013	Deepak Gumber	0.443

S. No.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
23	On the converse of a theorem of Schur	Archiv der Mathematik, Vol. 101, 17-20, 2013	Deepak Gumber and Hemant Kalra	0.376
24	On equality of central and class preserving automorphisms of finite p-groups	Indian Journal of Pure and Applied Mathematics, Vol. 44 (2013), 711-725	Hemant Kalra and Deepak Gumber	0.216
25	Intuitionistic fuzzy optimization technique for solving multi-objective reliability optimization problems in interval environment	Expert Systems with Applications, 41(7), 3157 - 3167, 2014	Harish Garg, Monica Rani, S.P. Sharma and Yashi Vishwakarma	1.854
26	Solving structural Engineering Design Optimization Problems using an artificial bee colony algorithm	Journal of Industrial and Management Optimization, 10(3), 777 - 794, 2014	Harish Garg	0.598
27	The Role of Screening and Treatment in the Transmission Dynamics of HIV/AIDS and Tuberculosis Co-infection: A Mathematical Study	Accepted in Journal of Biological Physics	Navjot Kaur, Mini Ghosh and S. S. Bhatia	0.951
28	Optimal equi-scaled families of Jarratt's Method	International Journal of Computer Mathematics (Taylor & Francis), Issue 90, vol. 2, 408-422, 2013.	Ramandeep Behl, V. Kanwar and Kapil K. Sharma	0.5
29	Another Simple Way of Deriving Several Iterative Functions to Solve Nonlinear Equations	Journal of Applied Mathematics (Hindawi Publishing Corporation (USA)), doi:10.1155/2012/294086, 2014	Ramandeep Behl, V. Kanwar and Kapil K. Sharma	0.656
30	A Novel Feature Extraction Technique for Offline Handwritten Gurmukhi Character Recognition	IETE Journal of Research, 59(6), 687-92, 2013.	Munish Kumar, R.K. Sharma and M. K. Jindal	0.2
31	An Efficient Post Processing Algorithm for Online Handwritten Gurmukhi Character Recognition using Set Theory	International Journal of Pattern Recognition and Artificial Intelligence, 27(4), 1353002 (1-17), 2013	Ravinder Kumar and R. K. Sharma	0.6
32	Punjabi DeConverter for Generating Punjabi from Universal Networking Language	Journal of Zhejiang University Science C, 14(3), 179-96, 2013	Parteek Kumar and R K Sharma	0.297

**List of research publications in Non-SCI Journals 2013-2014**

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1	A new analytical method for solving fuzzy differential equations	Iranian Journal of Fuzzy Systems, Vol. 10, pp. 19-39, 2013	Sneh Lata and Amit Kumar
2	Analysis of Chirp as windowing function through fractional Fourier transform	International Journal of Electronics, <u>Volume 100</u> , <u>Issue 9</u> , 2013	Pooja Mohindru, Rajesh Khanna, and S. S. Bhatia
3	Fixed point theorems for $\alpha$ - $\psi$ -contractive type mappings of integral type with applications	Accepted in Journal of Nonlinear and Convex Analysis	Jatinderdeep Kaur
4	Quadruple fixed point theorems for nonlinear contractions in partially ordered G-metric spaces	Tbilisi Mathematical Journal, 6, (2013), 29-44.	Jatinderdeep Kaur
5	Text Line detection and Segmentation in Handwritten Gurumukhi Scripts	International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 3, Issue 5, pp. 1075-1080, 2013	Aamisha, Khushneet Jindal
6	On solving Mincut Balanced Circuit Partitioning Problem for Digital Circuit Layout using Evolutionary Approach with Solution Archive	International Journal of Computer Applications(0975 - 8887) Volume 62- No.14, Jan 2013 ,pp 39-42.	Maninder Kaur, Kawaljeet Singh
7	Digital Circuit Layout Problem based on Graph Partitioning Technique: A Glance	IRACST - Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol.2, No. 6, June 2013, pp 2200-2204.	Maninder Kaur, Kawaljeet Singh
8	Transformation of Graph partitions into Problem Domain in Digital Circuit Layout	IRACST - Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol. 2, No. 7, June 2013,pp 2230-2231.	Maninder Kaur, Kawaljeet Singh
9	Comparative study of Circuit Partitioning Algorithms	IRACST - Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol. X, No. X, June 2013	Maninder Kaur, Kawaljeet Singh
10	An Intelligent Solution Archive Based Evolutionary Approach for Digital Circuit Layout.	International Journal of Computational Intelligence Research. ISSN 0974-1259 Vol. 9, No.1 (2013), pp. 31-36.	Maninder Kaur, Kawaljeet Singh

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
11	Digital Circuit Layout based on Graph Partitioning Technique using DNA Computing,	International Journal of Computer Applications (0975 - 8887) Volume 15- No.1, June 2013, pp 17-20.	Maninder Kaur, Kawaljeet Singh
12	Solving Standard Cell Placement Problem Using an Evolutionary Approach	International Journal of Computer Applications & Information Technology Vol. 3, Issue I June-July 2013 (ISSN: 2278-7720)	Maninder Kaur, Jobanpreet Kaur
13	A Parallel Evolutionary Approach for Solving Single Variable Optimization Problems	International Journal of Computer Applications & Information Technology Vol. 3, Issue II Aug-September 2013 (ISSN: 2278-7720)	Maninder Kaur, Priti Punia
14	Combinatorial interpretation of a generalized basic series	HMS-Volume (Accepted), Springer, 2013	A.K. Agarwal and M Rana
15	Impact of security over System performance	IJARCSSE, Volume 3, Issue 6, June 2013	Vaibhav Shrivastava, Gurpal Singh
16	Computer trend with security by RSA, DES and BLOWFISH Algorithm	IJCST, Volume 4, Issue 2, June 2013	Vaibhav Shrivastava, Gurpal Singh
17	Applying soft computing Approaches to predict defect density in software product release	Computing and Informatics. Accepted	Vijai Kumar, Arun Kumar, Rajesh Kumar
18	Fuzzy Entropy based Framework for Multi-Faceted Test Case Classification and Selection: An Empirical Study	IET software, Accepted	Manoj Kumar, Arun Kumar, Rajesh Kumar
19	Devnagari Numerals Classification and Recognition using an Integrated Approach	International Journal in Foundations of Computer Science, vol 3, pp. 61-66, 2013	Rajiv Kumar and Kanika Bansal
20	K-Algorithm A Modified Technique for Noise Removal in Handwritten Documents	International Journal of Information Sciences and Techniques (IJIST) Vol 3. No. 3, pp. 1-8, 2013	Rajiv Kumar and Kanika Bansal
21	Several New Families of Jarratts Method for Solving Systems of Nonlinear Equations,	Applications and Applied Mathematics: An International Journal, vol. 8, 701-716, 2013	Ramandeep Behl, Kumar S. and V. Kanwar
22	Generalized Sequence Spaces in a 2-nomed space defined by Ideal and a Modulus Function	Journal of "Analele Stiintifice ale Universitatii Ilexandruioan Cuza din Iasi-Serie Noua-Matematica, Accpeted	Sudhir Kumar, V. Kumar, S. S. Bhatia

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
23	Tuberculosis Diagnosis and Treatment: Negotiating The Solution And Implementations	International Journal of Current Research and Review, 5(6) 2013.	Navjot Kaur and S.S. Bhatia
24	MDP Feature Extraction Technique for Offline Handwritten Gurmukhi Character Recognition	Smart Computing Review, 3(6), 397-404, 2013.	Munish Kumar, M.K. Jindal and R.K. Sharma
25	Ridge Regression for the Prediction of Compressive Strength of Concrete	International Journal of Innovations in Engineering and Technology, 2(3), 106-111, 2013.	Palika Chopra, R. K. Sharma and Maneek Kumar
26	Evaluation of Rule based Machine learning algorithms on NSL-KDD dataset	International journal of Computational intelligence and Information Security, vol 4, no. 6, pp. 42-49, June 2013	Tejvir Kaur and Sanmeet Kaur
27	Emulation of ftp service using virtual honeypot	International Journal of Info & Computation Technology (IJICT) Volume 3, Number 10 (spl) (2013)	Aastha Bhandari, Sanmeet Kaur
28	Policy Scripts to Detect Network Intrusions	International Journal of Scientific & Engineering Research, Volume 4, Issue 8, August 2013	Sanmeet Kaur, Maninder Sing
29	Priority Based Hybrid Automation Testing Tool	International Journal of Computer Applications Technology and Research, 2(4), 443-448, 2013	Priyanka, Sunita Garhwal
30	Cost pipeline trade- off in a transportation problem	Yugoslavian Journal of Operational Research, 23(2),197-211, (2013)	Vikas Sharma, Rita Malhotra, Vanita Verma
31	Uniformly convergent 3-TGFEM Vs LSFEM for singularly perturbed convection-diffusion problems on a Shishkin based logarithmic mesh	International Journal of Numerical Analysis and Modeling, Series-B, 4(4):315-334, 2013	Vivek Sangwan, B.V. Rathish Kumar
32	Common fixed point theorems in modified intuitionistic fuzzy metric spaces	Journal of Applied mathematics, Volume 2013, Article ID 189321, 13 pages, <a href="http://dx.doi.org/10.1155/2013/189321">http://dx.doi.org/10.1155/2013/189321</a>	Manro, S., Kumar, S., Bhatia, S.S. and Tas, K
33	Modeling and OLAP cubes for Ground and Municipal Water Suppl	International Journal of Computational Water, Energy and Environmental Engineering, USA, Vol. 2, PP.77-82, July 2013	Zaidi, Taskeen, Singh Anupurna, and Saxena, Vipin

**Publication of papers in conferences 2013-2014**

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1	An Integrated System to Identify and Recognize Vehicle Number Plate	International Conference on Electronics, Communication and Information Technology held on Oct 4-5, 2013 at Thapar Institute of Engineering & Technology University, Patiala	Dr. Rajiv
2	Promoting Rural Education through Cloud Computing - An Analysis	Proc. of "Wilkes100- international Conference on Computing Sciences (ICCS)", at Lovely Professional University, Phagwara, India., Nov. 15-16, 2013,	Sharad Saxena, Shilpi Saxena, Vishal Raj Kohli, and Deepak Mehta
3	Rough Set Vs Entropy - Feature Selection Methods	Proc. Of International Conference on Advance Computing and Communication Technologies (ICACCT) (Asia Pacific Institute of Information Technology SD Panipat, India) Nov. 16, 2013,	Prahlad Modi, Sharad Saxena

**List of research publications in SCI Journals in year 2012-13**

S. No.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
1	Eigenfrequencies of rotationally and tidally distorted white dwarf models of stars	Astrophysics and Space Science (Ap&SS), 345, 155 - 167, 2013	Lal, A K, Kumar, T and Pathania, A	1.564
2	On the use of Roche equipotentials in analyzing the problems of binary and rotating stars	Journal of Astrophysics and Astronomy (JOAA), 2013, In Press	Pathania, A, Lal, A K and Mohan, C	0.4
3	Eigenfrequencies of rotationally and tidally distorted white dwarf models of stars	Astrophysics and Space Science, Vol. 345, issue 1, page 155-167, 2013	A. K. Lal,, Tarun Kumar and Ankush Pathania	1.686
4	Numerical solution of Chapman Kolmogorov differential difference equation arising in reliability engineering,	Applied Mathematics and Computation , Vol. 219, issue 14, p. 7645-7652, 2013	Manwinder Kaur, A. K. Lal, S. S. Bhatia and A. S. Reddy.	1.317
5	A robust computational technique for a system of singularly perturbed convection-diffusion equations	International Journal of Computational Methods, Vol. 10, issue 5, pp. 1350027, 2013	Vinod Kumar, Rajesh Kumar Bawa and A. K. Lal,	1.167

S. No.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
6	A Hybrid Initial Value Technique for Singularly Perturbed Boundary Value Problems	Computational and Applied Mathematics, published online 26 March, 2013, doi: 10.1007/s40314-013-0020-z	Vinod Kumar, R. K. Bawa and A. K. Lal,	0.0806
7	On the use of the Roche Equipotential in Analyzing the Problems of Binary and Rotating Stars,	Journal of Astrophysics and Astronomy (in press), 2013	Ankush Pathania, A. K. Lal and C. Mohan	0.400
8	Computational Analysis of Steel Industry	Mathematical Problem in Engineerin (Accepted), 2013	Shakuntala, A. K. Lal and S. S. Bhatia	0.777
9	Quadruple fixed point theorems for nonlinear contractions in partially ordered G-metric spaces	Tbilisi Mathematical Journal, 6, (2013)	Priya Shahi, Jatinderdeep Kaur and S.S. Bhatia	
10	On central automorphisms of finite p-groups	Communications in Algebra Vol. 41(3) 2013, 1117-1122	Mahak Sharma and Deepak Gumber	0.347
11	Comparative Study of Travelling Wave and Numerical Solutions for the Coupled Short Pulse (CSP) Equation,	Chinese Physics B, 22 (5) (2013) 050201, 2013	Vikas Kumar, Ram Jiwari and R K Gupta	1.376
12	A numerical scheme based on weighted average differential quadrature method for the numerical solution of Burgers' equation.	Appl. Math. Comput., 219 (2013) 6680-6691, 2013	Ram Jiwari, R.C. Mittal and K. K. Sharma	1.317
13	A numerical scheme based on differential quadrature method to solve time dependent Burgers' equation,	Engineering Computations, 30 (1) (2013), 117-131	R C Mittal, Ram Jiwari and K K Sharma	1.06
14	Numerical Simulation of Two Dimensional Quasilinear Hyperbolic Equations by Polynomial Differential Quadrature Method	Engineering Computations 30 (2013) 892-909	Vikas Kumar, Ram Jiwari and R K Gupta	1.06
15	Comparative Study of Travelling Wave and Numerical Solutions for the Coupled Short Pulse (CSP) Equation,	Chinese Physics B 22(5) (2013) 050201 - 7	Vikas Kumar, Ram Jiwari and R K Gupta	1.376
16	Optimal compromise solution of multi-objective minimal cost flow problems in fuzzy environment	Applied Mathematical Modelling, Vol. 37, pp. 1677-1693, 2013	Manjot Kaur and Amit Kumar	1.579

S. No.	Title of the paper	Name of Journal with volume, page nos., year	Name of the Author	Impact factor and Citation Index
17	A new method for solving differential equations with vague parameters	Applied Mathematical Modelling, Vol. 37, pp. 3282-3295, 2013	Sneh Lata and Amit Kumar	1.579
18	Mehar's method for solving fully fuzzy linear programming problems with L-R fuzzy parameters	Applied Mathematical Modelling, 37 (2013) 7142-7153	Jagdeep Kaur and Amit Kumar	1.579
19	A new method to find the unique fuzzy optimal value of fuzzy linear programming problems	Journal of Optimization Theory and Applications, Vol. 156, pp. 529-534, 2013	Jagdeep Kaur and Amit Kumar	1.062
20	Solving a fully fuzzy linear system with arbitrary triangular fuzzy numbers $(m, \alpha, \beta)$	Soft Computing, Vol. 17, pp. 691-702, 2013.	Neetu, Amit Kumar and Abhinav Bansal	1.880

#### List of research publications in NonSCI Journals in year 2012-13

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1.	Post Processing technique to reduce the tile boundary artifacts in JPEG2000 Images	International Journal of Multimedia and its Applications, Vol. 4, No. 1, pp. 127-136, 2012	Singara Singh, RK Sharma and MK Sharma
2.	Symmetry Reductions and exact solution of modified b-family equation	Indian Journal of Industrial and Applied Mathematics(Accepted) 2012	K. Singh, R.K. Gupta, Sachin Kumar, Anupma
3.	Symmetries and Exact Solutions of Third- order partial differential equation arising in the Impulsive Motion of a Flat Plate	Indian Journal of Industrial and Applied Mathematics(Accepted) 2012	R.K. Gupta, Sachin Kumar, Anupma
4.	On Symmetry Analysis and Exact Wave solutions of New Modified Novikov equation	International journal of Computational and mathematical and Mathematical sciences, 6, pp 65-70, 2012	Anupma bansal, R.K. Gupta
5.	On symmetric and exact solutions of Einstein vacuum equations for axially symmetric gravitational fields	International Journal of Mathematical and Computational Sciences 6 , pp 104-107, 2012	N. Goyal and R.K. Gupta



S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
6.	Travelling wave solutions for the Sawada-Kotera-Kadomtsev-Petviashvili equation and Bogoyavlensky-Konoplechenko equation by (G'/G)-expansion method	International Journal of Mathematical and Computational Sciences 6 , pp 118-122,2012	N. Goyal and R.K. Gupta
7.	A comparative study of Modal matrix and finite elements methods for two point boundary value problems	Int. J. of Appl. Math. and Mech. 8 (13), 29-45. 2012	D. Sharma, Ram Jiwari, and Sheo Kumar
8.	L1-convergence Of Modified Complex Trigonometric Sums,	AIP conference Proc., 1482, (2012), 471-475.	Jatinderdeep Kaur
9.	Multiobjective integer nonlinear fractional programming problem: A cutting plane approach	Journal: Opsearch , vol. 49 (2), pp 133-153. 2012	Vikas Sharma
10.	Method for solving a special type of fuzzy transportation problems	The Journal of Fuzzy Mathematics, Vol. 20, pp. 119-132, 2012	Amit Kumar, Amarpreet Kaur and Anila Gupta
11.	A new method for solving fuzzy critical path problems based on fuzzy linear programming formulation	The Journal of Fuzzy Mathematics, Vol. 20, pp. 103-117, 2012	Amit Kumar and Parmpreet Kaur
12.	An improved algorithm for solving fuzzy maximal flow problems	International Journal of Applied Science and Engineering, Vol. 10, pp. 19-27, 2012	Amit Kumar and Manjot Kaur
13.	A new method for solving fuzzy shortest path problems	Journal of Applied Mathematics and Informatics, Vol. 30, pp. 571-591, 2012	Amit Kumar and Manjot Kaur,
14.	A new method for solving fully fuzzy linear programming problems	Annals of Fuzzy Mathematics and Informatics, Vol. 3, pp. 103-118, 2012	Amit Kumar and Pushpinder Singh
15.	A new computational method for solving fully fuzzy linear systems of triangular fuzzy numbers	Fuzzy Information and Engineering, Vol. 4, pp. 63-73, 2012	Amit Kumar, Neetu and Abhinav Bansal
16.	A new computational method to solve fully fuzzy linear systems for negative coefficient matrix	International Journal of Manufacturing Technology and Management, Vol. 25, pp. 19-32, 2012	Amit Kumar, Neetu and Abhinav Bansal
17.	On L1-convergence of Modified Cosine Sums,	Southeast Asian Bulletin of Mathematics, 36,6, 2012, 831-836.	Jatinderdeep Kaur and S.S. Bhatia
18.	A new method for sensitivity analysis of fuzzy linear programming problems	ASOR Bulletin, Vol. 31, pp. 2-12, 2012	Amit Kumar and Neha Bhatia
19.	Sensitivity analysis for fuzzy linear programming problems based on interval valued fuzzy numbers	International Journal of Mathematics in Operational Research, Vol. 4, pp. 531-547, 2012	Amit Kumar and Neha Bhatia

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
20.	Strict sensitivity analysis for fuzzy linear programming problems	Journal of Fuzzy Set Valued Analysis, Vol. 2012, pp. 1-19, 2012	Amit Kumar and Neha Bhatia
21.	A note on "Fuzzy initial value problem for Nth-order fuzzy linear differential equations"	Journal of Fuzzy Set Valued Analysis, Vol. 2012, pp. 1-3, 2012	Amit Kumar and Sneh Lata
22.	Reliability evaluation of condensate system using fuzzy Markov model	Annals of Fuzzy Mathematics and Informatics, Vol. 4, pp. 281-291, 2012	Amit Kumar and Sneh Lata
23.	Quadruple fixed point theorems for nonlinear contractions in partially ordered G-metric spaces	Tbilisi Mathematical Journal, 6, (2013), 29-44.	Priya Shahi, Jatinderdeep Kaur, S.S. Bhatia
24.	Fuzzy fault tree approach for analyzing the fuzzy reliability of a gas power plant	International Journal of Reliability and Safety, Vol. 6, pp. 354-371, 2012	Manjit Verma, Amit Kumar and Yaduvir Singh
25.	Applying Neuro-fuzzy Approach to build the Reusability Assessment Framework across Software Component Releases - An Empirical Evaluation	International Journal of Computer Applications, Vol. 70, No. 15, pp: 41-47 2013	Vijai Kumar, Rajesh Kumar, Arun Sharma
26.	Power system reliability evaluation using fault tree approach based on generalized fuzzy number	Journal of Fuzzy Set Valued Analysis, Vol. 2012, pp. 1-13, 2012.	Manjit Verma, Amit Kumar and Yaduvir Singh
27.	Time Aware Test Case Prioritization based on Fault Coverage using Binary Integer Programming	International Journal of data and Network security, Vol. 2 No. 1, pp: 101-103 2013	Sunil, Rajesh Kumar
28.	Grapheme to Phoneme Conversion for Punjabi Language	International Journal of Science, Technology & Management Vol.3, pp. 3-10, May 2012	Ankita Goel, Divya Bansal, Khushneet Jindal
29.	Punjabi Speech Synthesis system Using HTK	International Journal of Information Sciences & Techniques Vol.2, No.4, pp. 57-69, July 2012	Divya Bansal, Ankita Goel, Khushneet Jindal
30.	A comparative study of Modal matrix and finite elements methods for two point boundary value problems	Int. J. of Appl. Math. and Mech. 8 (13) (2012), 29-45.(2012)	D. Sharma, Ram Jiwari, and Sheo Kumar
31.	A differential quadrature algorithm for the Numerical Solution of the Second-Order One dimensional Hyperbolic Telegraph Equation,	Int J of Nonlinear Sciences, 13 (3) 259-266.2012	Ram Jiwari, Sapna Pandit and R C Mittal
32.	Numerical solutions of two point boundary value problems using Galerkin-Finite element method	Int J of Nonlinear Sciences, 13 (2), 204-210.2012	Ram Jiwari, Dinkar Shurma and Sheo Kumar,

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
33.	Distance based clustering of software design components	International Journal of Applied Engineering Research, Vol. 7, issue 11,2012	Sunil Kumar, Rajesh K. Bhatia, Rajesh Kumar

### List of research publications in year 2011-2012

#### List of SCI Publications

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index (SCI)
1	Reliability analysis of polytube industry using supplementary variable technique	Applied Mathematics and Computation, Vol. 2818 (8), pp. 3981 - 3992,2011	Shakuntala, A. K. Lal, S. S. Bhatia, J. Singh	1.317
2	Soft Computing Based Software Test Cases Optimization: A Survey	International Review on Computers and Software, Vol. 6(4), July-2011	Manoj Pachariya, Arun Sharma, Rajesh Kumar	0.21
3	Quality aspects for component-based systems - A metrics based approach	Accepted in Software: Practice and Experience and published in Wiley online Library,2011	Vijai Kumar, Arun Kumar, Rajesh Kumar, P.S. Grover	0.519
4	STH: A Highly Scalable and Economical Topology for Massively Parallel Systems	Accepted in Journal of the Indian Institute of Science,2011	Jahangir Alam, Rajesh Kumar	0.22
5	Generalized thermo elastic waves in micro stretch plates loaded with fluid of varying temperature	International Journal of Applied Mechanics (IJAM), Vol. 3, issue 3, pp 563-586,2011	S. Kumar, J.N. Sharma, Y. D. Sharma	1.165
6	Mehar's method to find exact fuzzy optimal solution of unbalanced fully fuzzy multi-objective transportation problems	Optimization Letters 6 (2012) 1737-1751	Anila Gupta, Amit Kumar and Amarpreet Kaur	0.952
7	A Novel design Technique for variable Non-recursive Digital Filter based on FrFT	Electronics and electrical Engineering, No. 5 (121),2012	P.Mohindru, R. Khanna, S.S. Bhatia	0.659
8	Modelling the spread of HIV in a Stage Structured Population: Effect of Awareness	International Journal of BioMathematics 2, Vol. 5, No. 2, 2012	Navjot kaur, Mini Ghosh, S.S. Bhatia	1.68
9	Symmetries and exact solutions of the non-diagonal Einstein- Rosen metrics	Phy.Scr. Vol. 85, 015004(6pp),2012	N. Goyal and R.K. Gupta	1.204
10	A class of exact solution of Einstein field equation	Phy.Scr. Vol. 85, 055011 (6pp),2012	N. Goyal and R.K. Gupta	1.204

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index (SCI)
11	A class of new exact solutions of Einstein-Maxwell equations for magnetostatic	Chinese Physics B, 21,2012	N. Goyal and R.K. Gupta	1.376
12	Modified (G'/G)- Expansion Method for Finding Exact Wave solution of the coupled Klein-Gordon-Schrodinger Expansion	Mathematical Methods in the Applied Sciences, 35(10), pp 1175-1187,2012	Anupma Bansal, R.K. Gupta	0.8
13	Kawahara equation and modified Kawahara equation with time dependent coefficients: symmetry analysis and generalized G'G- expansion method	Mathematical Methods in the Applied Sciences (in press)2012	Lakhveer Kaur, R.K.Gupta	0.8
14	Coupled Higgs Field Equation and Hamiltonian Amplitude Equation : Lie Classical Approach and (G'/G)- expansion Method	Parmana-Journal of Physics (in press) (springer)2012	Sachin Kumar, K.Singh, R.K.Gupta	0.575
15	Painleve Analysis,lie symmetries and exact solutions for (2+1)- dimensional variable coefficients Broer-kaup equations	Commun Nonlinear Sci Numer Simulat, Vol.17, pp 1529-1541,2012	Sachin Kumar, K.Singh, R.K.Gupta	2.806
16	Structures and oscillations of rotationally and tidally distorted polytropic models of stars in the presence of Coriolis force	Proceeding of Royal Society A - Mathematical Physical and Engineering Sciences, Vol. 468, pp. 448-466,2012.	Ankush Pathania, A. K. Lal and C. Mohan	1.971
17	Effect of coriolis force an the structures and oscillations of rotationally and tidally distorted stars in binary systems	Proceedings of Royal Society A; Mathematics, physical and Engineering Sciences, 468, pp 448-466,2012	A.K.Lal, Ankush Pathania, C. Mohan	1.971
18	Equilibrium Structure of differentially rotating and tidally distorted Prasad odel including mass variation inside the stars	International Journal of Mathematical Archieve, 3(5), pp 1772-1778,2012	A.K.Lal, Seema Saini, Sunil Kumar	1.2
19	The Kippenhahn and Thomas averaging method for the structure of rotating stars	Bulletin of Astronomical Society of India,Vol. - 40,pp 41-50,2012	Ankush Pathania, A. K. Lal, C. Mohan and T. Medupe	2.722
20	Radius of the Roche equipotential surfaces	Astrophysics and Space Science, Vol. - 338, pp 127 - 145, 2012	Ankush Pathania and Thebe Medupe	1.686

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index (SCI)
21	On central automorphisms of finite p-group	Accepted in Communication in Algebra,2012	Dr. Deepak Gumber, Mahek Sharma	-
22	Symmetric duality for second order fractional programs	Optimization Letters, (Accepted) 2012	T.R. Gualti, Geeta & Khushboo Verma	0.952
23	G-type seismic waves in fibre reinforced media	Meccanica, Volume 47, Issue 7 (2012), Page 1775-1785,2012	A. Chattopadhyay, A. K. Singh	1.558
24	Propagation of a crack due to magnetoelastic shear waves in a self-reinforced medium	Journal of Vibration and Control. (Accepted )2012	A. Chattopadhyay, A. K. Singh	1.0
25	Haar wavelet quasilinearization approach for numerical simulation of Burgers' equation	Computer Physics Communications, 183 , pp 2413-2423,2012	Ram Jiwari	3.27
26	A differential quadrature method for solving Burgers'-type equation	International Journal of Numerical Methods for Heat and Fluid Flow, Vol. 22 Iss: 7, 2012	Ram Jiwari and R C Mittal,	1.09
27	A Differential Quadrature Algorithm to Solve the Two Dimensional Linear Hyperbolic Telegraph Equation with Diriclet and Neumann Boundary Conditions	Applied Mathematics and Computation, 218 pp 7279-7294.,2012	Ram Jiwari, S. Pandit and R C Mittal	1.32
28	Numerical simulation of two-dimensional sine-Gordon solitons by differential quadrature method	Computer Physics Communications, 183, pp 600-616, 2012	Ram Jiwari, S. Pandit and R C Mittal	3.268
29	Efficient Rate Control Approach for JPEG2000 Image Coding	Journal of Electronic Imaging, 21(3), 2012	Singara Singh, R. K. Sharma, and M. K. Sharma	0.694
30	Punjabi to UNL Enconversion System	SADHANA, 37(2),2012	Parteek Kumar and R K Sharma	0.259
31	A new approach for solving fuzzy transportation problems using generalized trapezoidal fuzzy numbers	Applied Soft Computing, Vol. 12, pp. 1201-1213,2012	Amarpreet Kaur and Amit Kumar	2.612
32	Optimization for different types of transportation problems with fuzzy coefficients in the objective function	Journal of Intelligent and Fuzzy Systems, Vol. 23, pp. 1-12, 2012	Amarpreet Kaur and Amit Kumar	0.556

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index (SCI)
33	Fuzzy solid transshipment problems and its fuzzy optimal solution	Applied and Computational Mathematics 11 (2012) 398-420	Amarpreet Kaur and Amit Kumar	0.551
34	Numerical Study of Two-Dimensional Reaction-Diffusion Brusselator System,	Appl. Math. Comput., 217 (12) (2011), 5404-5415	R.C. Mittal and Ram Jiwari	1.317
35	Exact fuzzy optimal solution of fully fuzzy linear programming problems with unrestricted fuzzy variables	Applied Intelligence, Vol.37, pp. 145-154, 2012	Jagdeep Kaur and Amit Kumar	0.849
36	Efficient Rate Control Approach for JPEG2000 Image Coding",	Journal of Electronic Imaging, Vol. 21, No. 3, pp. 033004(1-8), 2012.	Singara Singh, R. K. Sharma, and M. K. Sharma	0.694
37	Post Processing Technique to Reduce Tile Boundary Artifacts in JPEG2000 Compressed Images	International Journal of Multimedia and its Applications, Vol. 4, No. 1, pp. 127-136, 2012	Singara Singh, R. K. Sharma, and M. K. Sharma	NA
38	A new ranking approach and its application for solving fuzzy critical path problems	South African Journal of Industrial Engineering 23 (2012) 91-102	Parmpreet Kaur and Amit Kumar	0.215
39	Mehar's method to find exact fuzzy optimal solution of unbalanced fully fuzzy multi-objective transportation problems	Applied Mathematical Modelling, Vol. 36, pp. 4087-4095, 2012.	Anila Gupta, Amit Kumar and Amarpreet Kaur	1.579
40	Mehar's method to find exact fuzzy optimal solution of unbalanced fully fuzzy multi-objective transportation problems	Optimization Letters , Vol. 6, pp. 1737-1751, 2012	Anila Gupta, Amit Kumar and Amarpreet Kaur	0.952
41	Fuzzy optimal solution for unbalanced fully fuzzy minimal cost flow problems	International Journal of Fuzzy Systems, Vol. 14, pp. 1-10, 2012	Manjot Kaur and Amit Kumar	1.157
42	Method for solving fully fuzzy multi-objective solid minimal cost flow problems	Applied Intelligence 38 (2012) 239-254	Manjot Kaur and Amit Kumar	0.849
43	A new ranking approach for intuitionistic fuzzy numbers and its application	Journal of Applied Research and Technology 11 (2013) 381-396	Amit Kumar and Manjot Kaur	0.145
44	Mehar's method for solving fuzzy sensitivity analysis problems with LR flat fuzzy numbers	Applied Mathematical Modelling, Vol. 36, pp. 4087-4095,2012	Neha Bhatia and Amit Kumar	1.579

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index (SCI)
45	A new method for solving linear multi-objective transportation problems with fuzzy parameters	Applied Mathematical Modelling ,Vol. 36, pp. 1421-1430, 2012	Anila Gupta and Amit Kumar	1.579
46	Sensitivity analysis for interval-valued fully fuzzy linear programming problems	Journal of Applied Research and Technology. (Accepted) 2012	Neha Bhatia and Amit Kumar,	0.145
47	Finite element analysis for mass-lumped three-step Taylor Galerkin method for time dependent singularly perturbed problems with exponentially fitted splines	Numerical Functional Analysis and Optimization, 33(6):638-660, 2012	Vivek Sangwan, B.V. Rathish Kumar	0.711
48	An $\varepsilon$ – Uniform Hybrid Scheme for Singularly Perturbed Delay Differential Equation	Applied Mathematics and Computation, 217(21), 8216-8222, 2011	Rajesh Bawa, Arvind K. Lal and Vinod Kansal	1.534
49	The comparative study of the subsystems subjected to independent and simultaneous failures	Eksploatacja I Niezawodnosc-Maintenance and Reliability,4(58),63-71, 2011	Shakuntal, A. K. Lal, and S.S.Bhatia	0.319
50	Common Fixed Points of Expansive Mappings in Generalized Metric Spaces	Journal of Applied Research and Technology on June 15, 2012	Priya Shahi, Jatinderdeep Kaur and S.S. Bhatia	
51	point theorems for $\alpha$ - $\psi$ contractive type mappings of integral type with applications	Journal of Nonlinear and Convex Analysis on 10 <sup>th</sup> August, 2012	Priya Shahi, Jatinderdeep Kaur and S.S. Bhatia	
52	Fixed Point Theorems for $(\zeta, \alpha)$ -Expansive mappings in complete metric space	Fixed point theory and applications, 157, 2012, 1-12	Priya Shahi, Jatinderdeep Kaur and S.S. Bhatia	1.63
53	A differential quadrature method for solving Burgers' -type Equation	Int. J. of Numerical Methods for Heat and Fluid Flow, 22 (7), (2012), 880-895	R.C. Mittal and Ram Jiwari	0.752
54	A numerical study of singularly perturbed generalized Burgers-Huxley equation using three-step Taylor Galerkin method	Computers and Mathematics with Applications, 62(2), 776-786, 2011	Vivek Sangwan, B.V. Rathish Kumar, S.V.S.S.N.V.G. Krishna Murthy, Mohit Nigam	1.747

**List of research publications in NON-SCI Journals 2011-12**

<b>S. No.</b>	<b>Title of the paper</b>	<b>Name of the Journal with volume, page nos., year</b>	<b>Name of the authors</b>
1	New Exact Travelling Wave Solutions to the Ostrovsky Equations	International Journal of Applied mathematics and Mechanics, ISSN 0973-0184, Volume -2 , Number 1-2, pp.27-33,2011	R.K.Gupta,S.S.Bhatia and Rajeev
2	Reliability analysis of polytube industry when two subsystems are simultaneously fail	Bangladesh Journal of Scientific and Industrial Research, Vol. 46, Issue 4, pp. 475 - 480,2011	Shakuntala, Sanjay Kajal, A. K. Lal, S. S. Bhatia and Jai Singh
3	Operational Analysis of Rice Plant using Supplementary variable Techniques	International Journal of Applied Engineering and Research, 6 (5), pp. 726 - 730, (ISSN No: 0973-4562 and online ISSN No: 1087-1090.2011	Shakuntala, A. K. Lal, S. S., Bhatia and S. Kajal
4	Computational Analysis of Availability of Process Industry for High Performance	Communications in Computer and Information Science, 169(2), 265-274, (Springer Heidelberg Dordrecht London New York), 2011	Shakuntala, A. K. Lal and S. S., Bhatia
5	Reliability and Availability Analysis of Eight-Unit Ply-Board Manufacturing Plant	Accepted in International Journal of Quality and Reliability Management, 2011	Pawan Gupta, A. K. Lal, R. K. Sharma and J. Singh,
6	Modeling and Analysis of Software Availability of Router Software System using Fuzzy logic	International Journal of Mathematical Modeling Simulation and Applications (4(1), in press, ISSN No.: 0973 - 8355),2011	A. K. Lal, R. K. Bawa and Navdeep Singh
7	Barotropic Oscillations of Differentially Rotating Roche Models	International Journal of Applied Physics, 1, Number 1, pp. 69-78,2011	Sunil Kumar, A. K. Lal, H.G. Sharma and V. P. Singh
8	Analytic Expression of Roche - Harmonics for Stellar Models distorted by Differential Rotation and tidal distortion	Global Journal of Mathematical Sciences: Theory and Practical, 3, No. 3, p. 235-244,2011	Sunil Kumar, H.G. Sharma, V. P. Singh and A. K. Lal
9	Equilibrium structures of differentially Rotating and Tidally Distorted Polytropic Gaseous Sphere	World Journal of Modeling and Simulation, 7, No. 3, pp.206-217,(ISSN 1 746-723, England), 2011	Sunil Kumar, A. K. Lal, V. P. Singh
10	Towards Multi-Faceted Test Cases Optimization	Published in Journal of Software Engineering and Applications, Vol. 4(9),2011	Manoj Pachariya, Arun Kumar, Rajesh Kumar



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11	Weighted Bit Rate Allocation in JPEG2000 Compressed Images	IJCSI, Vol. 8, No. 5, pp. 458-462, (Non SCI, Impact Factor 0.242). 2011	Singara Singh, RK Sharma and MK Sharma
12	Galerkin-Finite Element Method for the numerical solution of Advection-Diffusion equation	IJPAM, 70 (3) , pp 389-399,2011	Ram Jiware, Dinkar Shurma and Sheo Kumar
13	Application of classical transportation methods for solving fuzzy transportation problems	Journal of Transportation Systems Engineering and Information Technology, Vol. 11, pp. 68-80, 2011	Amit Kumar and Amarpreet Kaur
14	Ranking of generalized fuzzy numbers with generalized fuzzy simplex algorithm	Journal of Mathematics and Applications, Vol. 34, pp. 53-74,2011	Amit Kumar and Pushpinder Singh
15	A new method for solving fuzzy linear programs with trapezoidal fuzzy numbers	Journal of Fuzzy Set Valued Analysis, Vol. 2011, pp. 1-12,2011	Amit Kumar and Jagdeep Kaur
16	Fuzzy optimal solution of fully fuzzy project crashing problems with new representation of LR flat fuzzy numbers	Rough Sets, Fuzzy Sets, Data Mining and Granular Computing , Lecture Notes in Computer Science, Springer Berlin / Heidelberg 2011, Vol. 6743, pp. 171-174.2011	Amit Kumar, Parmpreet Kaur and Jagdeep Kaur,
17	A new algorithm for solving shortest path problem on a network with imprecise edge weight	Applications and Applied Mathematics: An International Journal, Vol. 6 pp. 602-619, 2011	Amit Kumar and Manjot Kaur
18	Solution of fully fuzzy linear system with arbitrary coefficients,	International Journal of Applied Mathematics and Computation, Vol. 3, pp. 232-237,2011	Amit Kumar, Neetu and Abhinav Bansal
19	Sensitivity analysis for fuzzy linear programming problems,	Lecture Notes in Computer Science, Springer Berlin / Heidelberg 2011, Vol. 6743, pp. 103-110 2011	Amit Kumar and Neha Bhatia,
20	A new method for solving sensitivity analysis for fuzzy linear programming problems	International Journal of Applied Science and Engineering, Vol. 9, pp. 169-176,2011	Amit Kumar, Neha Bhatia
21	Fuzzy reliability analysis of a gas power plant using $T_{\omega}$ -based arithmetic operations on L-R type flat vague set	Electroenergetics Electrotechnics-Electromechanics+ Control, Vol. 2, pp. 32-44,2011	Manjit Verma and Amit Kumar
22	Reliability analysis of piston manufacturing system	Journal of Reliability and Statistical Studies, Vol. 4, pp. 43-55,2011	Amit Kumar and Sneha Lata
23	Staff computing approach for digital circuit layout based on graphical partitioning	International J. of CA, 15, pp 35-39,2011	Ms. Maninder Kaur

<b>S. No.</b>	<b>Title of the paper</b>	<b>Name of the Journal with volume, page nos., year</b>	<b>Name of the authors</b>
24	Post Processing technique to reduce the tile boundary artifacts in JPEG2000 Images	International Journal of Multimedia and its Applications, Vol. 4, No. 1, pp. 127-136, 2012	Singara Singh, RK Sharma and MK Sharma
25	Symmetry Reductions and exact solution of modified b-family equation	Indian Journal of Industrial and Applied Mathematics (Accepted) 2012	K. Singh, R.K. Gupta, Sachin Kumar, Anupma
26	Symmetries and Exact Solutions of Third-order partial differential equation arising in the Impulsive Motion of a Flat Plate	Indian Journal of Industrial and Applied Mathematics (Accepted) 2012	R.K. Gupta, Sachin Kumar, Anupma
27	On Symmetry Analysis and Exact Wave solutions of New Modified Novikov equation	International journal of Computational and mathematical and Mathematical sciences, 6, pp 65-70, 2012	Anupma bansal, R.K. Gupta
28	On symmetric and exact solutions of Einstein vacuum equations for axially symmetric gravitational fields	International Journal of Mathematical and Computational Sciences 6, pp 104-107, 2012	N. Goyal and R.K. Gupta
29	Travelling wave solutions for the Sawada-Kotera-Kadomtsev-Petviashvili equation and Bogoyavlensky-Konoplechenko equation by $(G'/G)$ -expansion method	International Journal of Mathematical and Computational Sciences 6, pp 118-122, 2012	N. Goyal and R.K. Gupta
30	A comparative study of Modal matrix and finite elements methods for two point boundary value problems	Int. J. of Appl. Math. and Mech. 8 (13), 29-45, 2012	D. Sharma, Ram Jiwari, and Sheo Kumar
31	An analysis of the effect of catastrophe on the number of times a markovian queue reaches its capacity in time $t$	International journal of statistics and analysis, volume 1, 373-382, 2011	N.k.Jain & Dhanesh Garg
32	Multiobjective integer nonlinear fractional programming problem: A cutting plane approach	Journal: Opsearch, vol. 49 (2), pp 133-153, 2012	Vikas Sharma
33	Method for solving a special type of fuzzy transportation problems	The Journal of Fuzzy Mathematics, Vol. 20, pp. 119-132, 2012	Amit Kumar, Amarpreet Kaur and Anila Gupta
34	A new method for solving fuzzy critical path problems based on fuzzy linear programming formulation	The Journal of Fuzzy Mathematics, Vol. 20, pp. 103-117, 2012	Amit Kumar and Parmpreet Kaur
35	An improved algorithm for solving fuzzy maximal flow problems	International Journal of Applied Science and Engineering, Vol. 10, pp. 19-27, 2012	Amit Kumar and Manjot Kaur

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
36	A new method for solving fuzzy shortest path problems	Journal of Applied Mathematics and Informatics, Vol. 30, pp. 571-591, 2012	Amit Kumar and Manjot Kaur,
37	A new method for solving fully fuzzy linear programming problems	Annals of Fuzzy Mathematics and Informatics, Vol. 3, pp. 103-118, 2012	Amit Kumar and Pushpinder Singh
38	A new computational method for solving fully fuzzy linear systems of triangular fuzzy numbers	Fuzzy Information and Engineering, Vol. 4, pp. 63-73,2012	Amit Kumar, Neetu and Abhinav Bansal
39	A new computational method to solve fully fuzzy linear systems for negative coefficient matrix	International Journal of Manufacturing Technology and Management, Vol. 25, pp. 19-32, 2012	Amit Kumar, Neetu and Abhinav Bansal
40	Power system reliability evaluation using fault tree approach based on generalized fuzzy number	<i>Journal of Fuzzy Set Valued Analysis</i> , Vol. 2012, pp. 1-13,2012.	Manjit Verma, Amit Kumar and Yaduvir Singh
41	A new method for sensitivity analysis of fuzzy linear programming problems	ASOR Bulletin, Vol. 31, pp. 2-12,2012	Amit Kumar and Neha Bhatia
42	Sensitivity analysis for fuzzy linear programming problems based on interval valued fuzzy numbers	International Journal of Mathematics in Operational Research, Vol. 4, pp. 531-547, 2012	Amit Kumar and Neha Bhatia
43	Strict sensitivity analysis for fuzzy linear programming problems	Journal of Fuzzy Set Valued Analysis, Vol. 2012, pp. 1-19, 2012	Amit Kumar and Neha Bhatia
44	A note on "Fuzzy initial value problem for Nth-order fuzzy linear differential equations"	Journal of Fuzzy Set Valued Analysis, Vol. 2012, pp. 1-3,2012	Amit Kumar and Sneh Lata
45	Reliability evaluation of condensate system using fuzzy Markov model	Annals of Fuzzy Mathematics and Informatics, Vol. 4, pp. 281-291, 2012	Amit Kumar and Sneh Lata
46	Distribution of the number of times M/M/2/N queuing system with heterogeneous servers reaches its capacity in time t under catastrophic effects	International journal of computational and applied mathematics, Volume 6, 169-192,201	N.k.Jain & Dhanesh Garg
47	Fuzzy fault tree approach for analyzing the fuzzy reliability of a gas power plant	International Journal of Reliability and Safety, Vol. 6, pp. 354-371, 2012	Manjit Verma, Amit Kumar and Yaduvir Singh
48	Integrability and L1- Convergence of Double Trigonometric Series	Analysis in Theory and Applications, vol. 27 (1), 2011, 32-39	Jatinderdeep Kaur and S.S. Bhatia
49	Differential Quadrature Method for Numerical Solution of coupled viscous Burgers' equations	Int. J. for Comput. Methods in Eng. Science and Mech.13 (2012), 1-5.	R.C. Mittal and Ram Jiware
50	Design & Implementation of Virtual Client HoneyPot	IJARCET Volume 1 of 4, June 2012	Himani Gupta, Gurpal Singh Chhabra

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
51	Implementation of Linux Based Network Forensic System Using HoneyNet	IJARCET Volume 1 of 4, June 2012	Jatinder Kaur, Gurpal Singh, Manpreet Singh
52	Distribution of the number of times M/M/2/N queuing system reaches its capacity in time t under catastrophic effects	International journal of computational science and mathematics, volume 3, 389-400,2011	N.k.Jain & Dhanesh Garg
53	A comparative study of Modal matrix and finite elements methods for two point boundary value problems	Int. J. of Appl. Math. and Mech. 8 (13) (2012), 29-45.(2012)	D. Sharma, Ram Jiwari, and Sheo Kumar
54	A differential quadrature algorithm for the Numerical Solution of the Second-Order One dimensional Hyperbolic Telegraph Equation,	Int J of Nonlinear Sciences, 13 (3) 259-266.2012	Ram Jiwari, Sapna Pandit and R C Mittal
55	Numerical solutions of two point boundary value problems using Galerkin-Finite element method, Int J of Nonlinear Sciences, 13 (2)(2012), 204-210.	Int J of Nonlinear Sciences, 13 (2), 204-210.2012	Ram Jiwari, Dinkar Shurma and Sheo Kumar,
56	Hybrid Algorithm, to segment Character in Gurmukhi Handwritten Text, with a Comparative Study.	International Journal. on Recent Trends in Engineering & Technology, Vol. 05, No. 01, pp. 174 - 176. 2011	Kumar, Rajiv. and Singh, Amardeep
57	Algorithm to Detect and Segment Gurmukhi Handwritten Text into Lines, Words and Characters	International Journal of Engineering and Tech, Singapore, Vol. 3, No 4. 2011	Kumar, Rajiv and Singh, Amardeep
58	Character Segmentation in Gurmukhi Handwritten Text using Hybrid Approach	International Journal of Computer Theory and Engineering, Vol. 3, No. 4, pp. 499-501.	Kumar, Rajiv and Singh, Amardeep
59	convergenec Of Modified Complex Trigonometric Sums	AIP conference Proc., 1482, (2012), 471-475	Jatinderdeep Kaur
60	L1-convergence of Modified Cosine Sums	Southeast Asian Bulletin of Mathematics, 36,6, 2012, 831-836	Jatinderdeep Kaur and S.S.Bhatia

### Publication of papers in conference proceedings and other publications 2011-12

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1	Performance Analysis of Industrial System under Corrective and Preventive Maintenance	International Conference on Quality and Reliability Engineering (ICQRE-11) held from December 20-22, I.S.I, Bangalore,2011	Manwinder Kaur, Arvind Kumar Lal, Satwinder Singh Bhatia and A. S. Reddy
2	Equilibrium structure of differentially rotating gaseous sphere with generalized rotation law	National Conference on Recent Trend in Mathematics and its Applications (RTMA-11) held from Dec. 16-17,SLIET, Longowal 2011	Arvind Kumar Lal, Seema Saini, V. P. Singh and C. Mohan

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
3	Eigen frequencies of pseudo-radial modes of oscillations of rotationally and tidally distorted white dwarf stars	National Conference on Recent Trend in Mathematics and its Applications (RTMA-11) held from Dec. 16-17, SLIET, Longowal 2011	Arvind Kumar Lal and Tarun Kumar
4	A Genetic Algorithm based Technique for Efficient Scheduling of Tasks on Multiprocessor System	International Conference on Soft Computing for Problem Solving (SocProS-2011) held from December 20-22, I.I.T., Roorkee, 2011	Poonam Pawar, A. K. Lal, Jugwinder Singh
5	A Stochastic Model to Study the Cost Benefit Analysis of a Two - Unit System working in a Rice Plant with varying Demand	International Conference on Soft Computing for Problem Solving (SocProS-2011) held from December 20-22, I.I.T., Roorkee, 2011	Rachana, A. K. Lal, S. S. Bhatia, and Gulshan Taneja
6	On the oscillations of differentially rotating polytropes	National Conference on Recent Trend in Mathematics and its Applications (RTMA-11) held from Dec. 16-17, SLIET, Longowal 2011	Arvind Kumar Lal, Sunil Kumar, V. P. Singh
7	Predicting Antioxidant Capacity of Whey Protein Hydrolysates Using Soft Computing Models	in Proc. International Conference on Soft Computing for Problem Solving (SOCPROS 2011), Volume 131, 259-265, DOI: 10.1007/978-81-322-0491-6_25, 2011	A. K. Sharma, B. Mann and R. K. Sharma
8	Offline Handwritten Gurmukhi Character Recognition Using Curvature Feature",	in Proc. of AMOC2011, 981-989, 2011	Munish Kumar, M. K. Jindal, and R. K. Sharma
9	Random Automatic Detection of Clusters	in Proc. International Conference on Image Information Process Processing (ICIIP-2011), Digital Object Identifier: <a href="https://doi.org/10.1109/ICIIP.2011.6108856">10.1109/ICIIP.2011.6108856</a> pp. 1 - 6, 2011.	Mamta Mittal, V. P. Singh, and R. K. Sharma
10	SVM based Offline Handwritten Gurmukhi Character Recognition	in Proc. of SCAKD-2011, Russia, 52-63, 2011	Munish Kumar, R. K. Sharma, and M. K. Jindal
11	k-Nearest Neighbor Based Offline Handwritten Gurmukhi Character Recognition	in Proc. of ICIIP-2011 (IEEE), 2011	Munish Kumar, M. K. Jindal, and R. K. Sharma
12	Classification of Characters and Grading Writers in Offline Handwritten Gurmukhi Script	in Proc. of ICIIP-2011 (IEEE), 2011	Munish Kumar, R. K. Sharma, and M. K. Jindal
13	Review on OCR for Handwritten Indian Scripts Character Recognition	in Proc. of DPPR-2011, 268-276, 2011	Munish Kumar, M. K. Jindal, and R. K. Sharma

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
14	Challenges in Creation of Punjabi WordNet and Bilingual Dictionaries	in Proc. of the Second National Workshop of Indradhanush WordNet Consortium, Goa University, August 8-10, 2011, 105-112	R.K. Sharma, Parteek Bhatia, Rekha Rattan
15	K- means Clustering of Use-Cases using MDL	Proceedings of Obcom-2011, held at IIT Chennai Dec. 9-11,2011	Sunil Kumar, Rajesh Kumar Bhatia, Rajesh Kumar,
16	Object Use –Cases clustering using PFT	Published in Proceedings of International Conference on Information and Intelligent Computing (ICIIC 2011) held at Hongkong, China during Nov. 25-27, 2011	Sunil Kumar, Rajesh Kumar Bhatia, Rajesh Kumar
17	Contemporary Study of Cloud Computing Environment	International Conference on advancing in Computing and Artificial Intelligence, Published in ACM proceedings, pp 233-235, 2011	Vinay Kukreja, Jaiteg Singh, Anju Sharma
18	Cultural Computing: A Case study of Northern Indian Culture	International conference on Culture and Computing, Japan, pp. 131-132. 2011	Bhupinder Kochhar, Anju Sharma, Ashish Jolly,
19	Second order symmetric duality in non differential multiobjective programs over cones	International conference on Advances in Modelling, Optimization & Computing ,2011	T.R. Gualti, Geeta & Khushboo Verma
20	An iterative algorithm for a class of integer bilevel programming problems	International conference on Advances in modelling, optimization and computing (AMOC - 2011), 408-417, 2011	Vikas Sharma, Kalpana Dahiya, Vanita Verma
21	Modified approach for analyzing the fuzzy reliability of a marine power plant	Proceedings of International Congress on Productivity, Quality, Reliability, Optimization and Modeling , pp. 767-779,2011	Amit Kumar and Sneha Lata
22	Equilibrium structure of differentially rotating white Dwarf models of stars using modified Roche Approximation	National Conference on applied mathematics and computational Physics, Proceeding name : Advances in applied mathematics and computational Physics, pp 132-139, Muradabad, 2012	A.K.Lal, Seema saini, C.Mohan
23	Modeling The Effect of Female Sex-Workers on The Transmission dynamics of HIV/AIDS	Proceedings of the National Conference on Mathematical Modeling, Simulation and Optimization (MMSO-2012), July 20, 2012 , Organized by School of Applied Sciences Chitkara University, Punjab, Electronic version, 34-38,2012	Navjot Kaur, Mini Ghosh and S.S. Bhatia

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
24	Tile Boundary Artifacts Reduction in JPEG2000 Images	International Conference on Signal and Image Processing, Bangalore, 3-4 Jan,2012	Singara Singh, RK Sharma and MK Sharma
25	FAR and FRR based analysis of iris recognition system	in Proc. IEEE International Conference on Signal Processing, Computing and Control (ISPCC 12), 1-6, 15-17 March,2012	Atul Bansal, R. Agarwal, and R. K. Sharma
26	Cascading Style Sheet Styling Issues in Punjabi Language	Communications in Computer and Information Science - Information Systems for Indian Languages, 1, Volume 139, Part 2, Pages 242-245, 2012.	Swati Mittal, R. K. Sharma and Parteek Bhatia,
27	State Complexities of different types of regular languages: a systematic Review	Proc. of International conference on recent trends in computing, mechatronics and communication, feb 25-26,2012	Meenu Lochan, Sunita Garhwal
28	Person name date and place identification and extraction from finite state automaton: A systematic Review	Proc. of International conference on recent trends in computing, mechatronics and communication, feb 25-26,2012	Roohi Sharma, Sunita Garhwal
29	Cultural Computing: A Review and Prototype Implementation of Northern Indian Culture	International Conference on Computer and Information Sciences, Malaysia. (Accepted),2012	Bhupinder Kochhar, Anju Sharma,
30	Similarity analysis and new exact solutions of the Einstein Maxwell equations for the non- static Einstein and Rosen metrics	Proceedings of International conference on Mathematics and Statistic (Accepted) 2012	N. Goyal and R.K. Gupta
31	Traveling wave solutions for the Kadomtsev-Petviashvili-Benjamin-Bona-Mahony Equation and the Ito Equation By $(G'/G)$ -Expansion Method	Proceedings of International conference on Emerging Trends in Engineering and Management pp (423-428)2012	N. Goyal and R.K. Gupta
32	Combinatorial interpretation of a double summation series	International Conference of special functions and applications (ICSFA), SVNIT, Surat, Gujarat, 27-29 June,2012.	M. Rana
33	Snort rule Execution and front End for Snort Rule Making	International Conference on Advanced Computing Technologies, June 2012 at Gurukul Vidyapeeth, Chandigarh.2012	.Isha Singla, Sanmeet Kaur
34	Intrusion Detection System Classification: A Survey	International Conference on Advanced Computing Technologies, June 2012 at Gurukul Vidyapeeth, Chandigarh.2012	.Isha Singla, Sanmeet Kaur

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
35	Comparative Analysis of Various Misuse Detection Approaches: A Survey	International Conference on Advanced Computing Technologies, June 2012 at Gurukul Vidyapeeth, Chandigarh.2012	Shaffali Gupta, Sanmeet Kaur
36	Design and Implementation of Policy Scripts to Detect Network Intrusions using Bro IDS	International Conference on Advanced Computing Technologies, June 2012 at Gurukul Vidyapeeth, Chandigarh.2012	Shaffali Gupta, Sanmeet Kaur
37	L1-convergence of modified complex trigonometric sums	ICFAS-2012, Kuala Lumpur, Malaysia, 12-14 June, 2012	Jatinderdeep kaur

### List of research publications in year 2010-2011

#### List of SCI Publications

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index (SCI)
1	Availability analysis of polytube industry when two subsystems are simultaneously fail	Bangladesh Journal of Scientific and Industrial Research, Vol. 46, Issue 4, pp. 475 - 480,2011	Shakuntala, Sanjay Kajal, A. K. Lal, S. S. Bhatia and Jai Singh	-
2	A new approach for ranking non-normal p-norm trapezoidal fuzzy numbers	Computers and Mathematics with Applications, Vol. 61, pp. 881-887, 2011	Amit Kumar, Pushpinder Singh, Amarpreet Kaur and Parmpreet Kaur	1.747
3	Development of efficient artificial neural network and statistical models for forecasting shelf life of cow milk khoa - a comparative study	in the Proceedings of the International Conference on High Performance Architecture and Grid Computing (HPAGC-2011), Springer-Verlag GmbH, Berlin (Germany), 145-149, 2011	S. Goyal, A. K. Sharma and R. K. Sharma	
4	A new method for solving fuzzy transportation problems using ranking function	Applied Mathematical Modelling, Vol. 35, pp. 5652-5661,2011	Amarpreet Kaur and Amit Kumar	1.579
5	A new method for solving fully fuzzy linear programming problems	Applied Mathematical Modelling, Vol. 35, pp. 817-823, 2011	Amit Kumar, Jagdeep Kaur and Pushpinder Singh	1.579
6	Mehar's method for analyzing the fuzzy reliability of piston manufacturing system	Eksploracja i Niezawodnosc-maintenance and Reliability, Vol. 51, pp. 26-39,2011	Sneh Lata and Amit Kumar	0.333



**List of research publications in NON-SCI Journals 2010-11**

<b>S. No.</b>	<b>Title of the paper</b>	<b>Name of the Journal with volume, page nos., year</b>	<b>Name of the authors</b>
1	An intersection theorem in free group rings	International Journal of Algebra Vol. 4, No. 162010769-775	Deepak Gumber
2	A Numerical Scheme for singularly perturbed Burger-Huxley Equation,	J. Appl. Math. & Informatics 29 (2011), No. 3-4, 813-829	R.C. Mittal and Ram Jiwari
3	Numerical Scheme for Some Nonlinear Differential Equations Models in Biology,	Int. J. for Comput. Methods in Eng. Science and Mech 12 (3), (2011), 134-140.	R.C. Mittal and Ram Jiwari
4	Application of linear programming for solving fuzzy transportation problems	Journal of Applied Mathematics and Informatics, Vol. 29, pp. 831-846, 2011	Amit Kumar and Amarpreet Kaur
5	Fuzzy linear programming approach for solving fuzzy transportation problems with transshipment	Journal of Mathematical Modelling and Algorithms, Vol. 10, pp. 163-180, 2011	Amit Kumar, Amarpreet Kaur and Anila Gupta
6	New methods for solving fuzzy transportation problems with some additional transshipments	ASOR Bulletin , Australian Society for Operations Research , Vol. 30, pp. 42-61,2011	Amit Kumar, Amarpreet Kaur and Anila Gupta
7	Methods for solving unbalanced fuzzy transportation problems	Operational Research-An International Journal, Vol. 11, 2011	Amit Kumar and Amarpreet Kaur
8	Application of classical transportation methods to find the fuzzy optimal solution of fuzzy transportation problems	Fuzzy Information and Engineering , Vol. 3, pp. 81-99,2011	Amit Kumar and Amarpreet Kaur
9	A new approach for fuzzy critical path analysis,	International Journal of Mathematics in Operational Research, Vol. 3 , pp. 341-357, 2011	Amit Kumar and Parmpreet Kaur
10	Exact optimal solution of critical path problems	Applications and Applied Mathematics, Vol. 6, pp. 1992-2008, 2011	Amit Kumar and Parmpreet Kaur
11	An algorithm for solving fuzzy maximal flow problems using generalized triangular fuzzy numbers,	International Journal of Hybrid Intelligent Systems, Vol. 8 , pp. 15-24, 2011	Amit Kumar and Manjot Kaur
12	A new algorithm for solving network flow problems with fuzzy arc lengths	Turkish Journal of Fuzzy Systems, Vol. 2, pp. 1-13,2011	Amit Kumar and Manjot Kaur
13	Methods for solving Fuzzy assignment problems and fuzzy traveling salesman problems with different membership functions	Fuzzy Information and Engineering, Vol. 3, pp. 3-21,2011	Amit Kumar and Anila Gupta
14	A new method for solving fuzzy generalized assignment problems with L-R type fuzzy parameters	Journal of Advanced Research in Applied Mathematics, Vol. 3, pp. 74-84, 2011	Amit Kumar and Anila Gupta,

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
15	Method for solving fully fuzzy assignment problems using trapezoidal fuzzy numbers	Advances in Fuzzy Mathematics, Vol. 6, pp. 39-51,2011	Amit Kumar, Anila Gupta and Amarpreet Kaur
16	A new approach for solving fully fuzzy linear systems	Advances in Fuzzy Systems, Vol. 2011, 2011	Amit Kumar, Neetu and Abhinav Bansal
17	A new method for solving fuzzy sensitivity analysis problems	International Journal of Applied Science and Engineering, Vol. 9, pp. 49-64,2011	Amit Kumar and Neha Bhatia
18	On certain new exact solutions of (2+1) dimensional calogero Degasperis equation via symmetry approach	International journal of Nonlinear science, 13, pp 475-4812012	Anupma bansal, R.K. Gupta
19	Syntax Planning for Punjabi DeConverter	Journal of Zhejiang University Science C	Parteek Kumar and R K Sharma
20	Generation of UNL Attributes and Resolving Relations for Punjabi Enconverter	Malaysian Journal of Computer Science (ISSN 0127-9084) 24(1), 34-46, 2011	Parteek Kumar and R. K. Sharma

### List of research publications in National Journals

#### Publication of papers in conference proceedings and other publications 2010-11

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1	Fuzzy optimal solution of fuzzy transportation problems with transshipments	<u>Rough Sets, Fuzzy Sets, Data Mining and Granular Computing</u> , Lecture Notes in Computer Science, Springer Berlin / Heidelberg 2011, Vol. 6743, pp. 167-170	Amit Kumar, Amarpreet Kaur and Manjot Kaur
2	Fuzzy optimal solution of fully fuzzy project crashing problems with new representation of LR flat fuzzy numbers,	<u>Rough Sets, Fuzzy Sets, Data Mining and Granular Computing</u> , Lecture Notes in Computer Science, Springer Berlin / Heidelberg 2011, Vol. 6743, pp. 171-174.	Amit Kumar, Parmpreet Kaur and Jagdeep Kaur
3	Sensitivity analysis for fuzzy linear programming problems	<u>Rough Sets, Fuzzy Sets, Data Mining and Granular Computing</u> , Lecture Notes in Computer Science, Springer Berlin / Heidelberg 2011, Vol. 6743, pp. 103-110.	Amit Kumar and Neha Bhatia

### List of research publications in year 2009-2010

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
1	HMM based Online Handwritten Gurmukhi Character Recognition	International Journal of Machine Graphics and Vision, 19(2), 2010	Anuj Sharma, Rajesh Kumar and R. K. Sharma	--
2	Performance analysis of adaptive buffer management mechanism using autoregressive based MPEG-4 encoded video traffic model	Simulation Modelling Practice and Theory, 17(10), 1642-62, 2009	Sakshi Kaushal and R. K. Sharma	0.924
3	Effects of differential rotations on the eigenfrequencies of small adiabatic barotropic modes of oscillations of polytropic models of star	Journal of Physics A: Mathematical and Theoretical, 42, 485212, 2009.	A. K. Lal, Ankush Pathania, Alka Bhalla and C. Mohan	1.54
4	Modeling and Analysis of Software Availability of Web-based System with 3-tier architecture	International Journal of Computer Applications in Engineering, Technology and Sciences, , 2, p.483-487, October, 2009	A. K. Lal, R. K. Bawa, Navdeep Singh	--
5	A Quantitative Evaluation of Aspect oriented Software Quality model	ACM SIGSOFT Software Engineering Notes Vol. 34, Issue 5, pp 1-9, September 2009.	Avadhesh Kumar;Rajesh Kumar ; P. S. Grover;	--
6.	A fuzzy Logic Approach to Measure Complexity of Generic Aspect oriented Systems	Journal of Object Technology Vol. 9, Issue 3, pp: 59-77, June 2010.	Rajesh Kumar ; P.S. Grover; <b>Avadhesh</b> Kumar	--
7.	Predicting Maintainability for Component based Systems by Using Fuzzy Logic	Communication in Computer and Information Science, Vol. 40, Issue 11 pp: 581-591, August 2009.	Arun Sharma, Rajesh Kumar, P. S. Grover	--
8.	Linearly Extendible Arm(LEA)- A Constant Degree Topology for Designing Cost Effective product networks	Ubiquitous Computing and Communication Journal, Vol. 5, Issue 2, pp: 39-47, June 2010.	Alam, J.;Rajesh Kumar, Khan, Z.	--
9.	Eight Row Matrix(ERM) : A new topology for designing Cost Effective product networks	Journal of engineering Science and Technology, Vol. 2, Issue 4, pp: 330-340, June 2010.	Alam, J.;Rajesh Kumar,	--
10.	Performance Analysis of Dynamic load Balancing Techniques for parallel and Distributed system	ACM SIGSOFT Software Engineering Notes, Vol. 34, Issue 3, pp: 1-6, February 2010.	Khan J. ; Rajesh Kumar ; Singh R.; Alam J.;	--

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
11	Selection of Warehouse Sites for Clustering Ration Shops to Them with Two Objectives through a Heuristic Algorithm Incorporating Tabu Search	Opsearch (Springer) vol. 46(4) p.449-460	Satya Prakash; M. K. Sharma Amarinder ;	--
12	An algorithm for solving the bi-objective warehouse problem in fuzzy environment using tabu search	International Journal of Physical and Mathematical Sciences	Amit Kumar; Anila Gupta, M. K. Sharma	--
13	"Modelling Biological Control of Algal Bloom in a Lake Caused by Discharge of Nutrients"	Journal of Biological Systems, Vol 18, Issue 1 , 161-172, 2010	Mini Ghosh	0.53
14	"Modelling Prey-predator Type Fishery with Reserve Area"	International Journal of Biomathematics, Vol. 3, No-3, 1-15, 2010.	Mini Ghosh	--
15	Detection and segmentation of Handwritten Text in Gurmukhi Script using Flexible Windowing	International Journal Of Computer Theory and Engineering, 02 Number 03, 329- , 2010	Rajiv Kumar; Amardeep Singh	--
16	A Hybrid Approach to Classify Gurmukhi Script Characters	International Journal of Recent Trends in Engineering, Vol 3, No 2, 103-, 2010	Rajiv Kumar; Antarpreet Kaur; Amardeep Singh;	--
17	Slant submanifolds of LP-contact manifolds	Differential Geometry-Dynamical systems, Vol. 12 (2010), 102-108	M A Khan	--
18	Warped product pseudo-slant submanifolds of Trans-Sasakian manifolds,	Thai Journal of Mathematics, Vol. 8, No. 1(2010) 205-215	M A Khan	--
19	Totally Umbilical Pseudo-Slant submanifolds of Nearly Cosymplectic manifolds,	Serdica Math. Journal, Vol. 36, (2010)1001-1012	M A Khan	--
20	The Dullin-Gottwald-Holm Equation: Classical Lie Approach and Exact Solutions"	International Journal of Nonlinear Science 9 (2010) 1-7.	R K Gupta, Anupma	--
21	Convergence of modified complex trigonometric Sums in the metric space L	Lobachevskii Journal of Mathematics, , Vol. 31, No. 3, pp. 290-294, 2010	Jatinderdeep Kaur and S.S. Bhatia	--
22	RM Approach for Ranking of Generalized Trapezoidal Fuzzy Numbers	Fuzzy Information and Engineering, Vol. 2, No.1, 37-47, 2010.	A. Kumar, P. Singh, A. Kaur, P. Kaur	--
23	Fuzzy Optimal Solution of Fully Fuzzy Linear Programming Problems with Inequality Constraints	International Journal of Applied Mathematics and Computer Sciences Vol. 6, No. 1, 2010	A. Kumar, J. Kaur, P. Singh	--

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
24	Ranking of Generalized Trapezoidal Fuzzy Numbers Based on Rank, Mode, Divergence and Spread	In Press. Turkish Journal of Fuzzy Systems.	A. Kumar, P. Singh, A. Kaur, P. Kaur	--
25	Ranking of Generalized Exponential Fuzzy Numbers using Integral Value Approach	International Journal of Advances in Soft Computing and Its Applications, Vol. 2, No. 2, 221-230 2010	A. Kumar, P. Singh, A. Kaur	--
26	Big-M Method for Solving Linear Programming Problems using Generalized Fuzzy Numbers	International Journal of Computing Science and Communication Technologies, Vol. 3, No. 1, 2010	A. Kumar, P. Singh, J. Kaur	--
27	A New Method for Solving Fully Fuzzy Linear Programming Problems	Applied Mathematical Modelling, Vol. 35, No. 2, 817-823	A. Kumar, J. Kaur, P. Singh	1.375
28	Equality of Generalized Triangular Fuzzy Numbers,	International Journal of Physical and Mathematical Science, Vol. 1, No. 1, 2010	A. Kumar, P. Singh, A. Kaur, P. Kaur	--
29	Solving Fully Fuzzy Linear Programming Problems with Inequality Constraints	International Journal of Physical and Mathematical Science, Vol. 1, No. 1, 2010	A. Kumar, J. Kaur, P. Singh	--
30	Fuzzy linear programming problems with fuzzy parameters,	Journal of Advanced Research in Scientific Computing, 2, 1-12, 2010	A. Kumar, J. Kaur, P. Singh	--
31	A New Approach for Ranking of L-R type Generalized Fuzzy Numbers,	Tamsui Oxford Journal of Mathematical Sciences, Vol. 27, No. 2, 2011	A. Kumar, P. Singh, A. Kaur, P. Kaur	--
32	Effect of Coriolis force on the shapes of rotating stars and stars in binary systems	Astrophysics and Space Science (Ap&SS), 319, 45 - 53, 2009	Lal, A K, Pathania, A and Mohan	1.686
33	A numerical study of pulsatile power law fluid flow in a porous channel	Journal of Mechanics in Medicine and Biology, Vol. 9(3), 437-447, 2009	B.V. Rathish Kumar, Shalini, Mohit Nigam, Vivek Sangwan, S.V.S.S.N.V.G. Krishna. Murthy	0.468
34	Non-darcy mixed convection in a fluid saturated square porous enclosure under suction effect: part-II	Journal of Porous Media, Vol. 13(9), 799-805, 2010	S.V.S.S.N.V.G. Krishna Murthy, B.V. Rathish Kumar, Vivek Sangwan, Mohit Nigam, Peeyush Chandra	0.707

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
35	Non-darcy mixed convection in a fluid saturated square porous enclosure under suction effect: part-I	Journal of Porous Media, Vol. 13(6), 537-554, 2010	B.V. Rathish Kumar, S.V.S.S.N.V.G. Krishna Murthy, Vivek Sangwan, Mohit Nigam, Peeyush Chandra	0.707
36	A numerical simulation of cardiac electric activity in LV based on mono-domain model	Journal of Mechanics in Medicine and Biology, 10(3), 431-444, 2010	B.V.Rathish Kumar, S.K.Pathak, Sangwan Vivek, S.K.Murthy	0.468
37	Effect of Coriolis force on the Roche limit and shapes of Roche equipotential surface of binary systems,	Astrophysics and space Science (Netherlands), 319, 45-53, 2009	A. K. Lal, Ankush Pathania and C. Mohan,	1.12
38	Lamb waves in micropolar thermoelastic solid plates immersed in liquid with varying temperature	Meccanica , (springer)44: 305-319(2009)	J.N. Sharma S.Kumar	1.518
39	Detection and segmentation of Handwritten Text in Gurmukhi Script using Flexible Windowing.	International Journal of Computer Theory and Engineering, Vol 2, No 3, pp. 329-332. 2010	Kumar, Rajiv. and Singh, Amardeep.	
40	Detection and segmentation of Lines and Words in Gurmukhi Handwritten Text. In.	Proceedings of IEEE International Advance Computing Conference IACC - 10, IEEE Xplore,2010	Kumar, Rajiv. and Singh, Amardeep.	
41	Challenges in Segmentation of Text in Handwritten Gurmukhi Script	Proceedings of BAIP 2010, CCIS 70, pp. 388-392, 2010.© Springer-Verlag Berlin Heidelberg 2010, 10.1007/978-3-642-12214-9_63, 2010	Kumar, Rajiv. and Singh, Amardeep	
42	A Hybrid Approach to Classify Gurmukhi Script Characters	International Journal of Recent Trends in Engineering, Vol. 3, No. 2, pp. 103 - 105, 2010	Kaur, Antarpreet Kumar, Rajiv and Singh, Amardeep	
43	Convergence Of Modified Complex Trigonometric Sums In The Metric Space L	Lobachevskii Journal of Mathematics,2010,Volume 31, Number 3, 290-294	Jatinderdeep Kaur and S.S. Bhatia	
44	The Extension of the Theorem of J. W. Garrett C. S. Rees and C. V. Stanojevic from One Dimension to Two Dimension	International Journal of Mathematics Analysis, Vol. 3, (2009) no. 26, 1251 - 1257	Jatinderdeep Kaur and S.S. Bhatia	
45	Numerical Study of Burger-Huxley Equation by differential Quadrature Method	Int. J. of Appl. Math. and Mech 5(8) (2009), 1-9.	R.C. Mittal and Ram Jiwari	

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors	Impact Factor and Citation Index
46	Differential Quadrature Method for Two Dimensional Burgers' Equations,	Int. J. for Comput. Methods in Eng. Science and Mech 10 (2009), 450-459	R.C. Mittal and Ram Jiware	
47	Use of Wavelet Transform Extension for Graphics Images	International Journal of Image Processing, Vol. 3, No. 1, pp. 55-60, 2009	Singara Singh, R. K. Sharma, and M. K. Sharma	NA
48	On segmentation of touching characters and overlapping lines in degraded printed Gurmukhi script	International Journal of Image and Graphics, World Scientific Publishing Company, 9(3), 321-353, 2009	M. K. Jindal, G. S. Lehal and R. K. Sharma	
49	Online handwritten Gurmukhi strokes preprocessing	International Journal of Machine Graphics and Vision, 18(1), 105-20, 2009	Anuj Sharma, R. K. Sharma and Rajesh Kumar	
50	Modeling vibration frequencies of annular plates by regression based neural network	Applied Soft Computing Journal, 9(1), 439-447, 2009	V. P. Singh, S. Chakraverty, R. K. Sharma and G. K. Sharma	
51	Information systems and decision making across functional areas in manufacturing sector	Business Perspectives, 11(1), 47-54, 2009	Khushdeep Dharni, R. K. Sharma and Ravi Kiran	
52	Generation of case markers for UNL-Punjabi Deconverter	International Journal of Systemics, Cybernetics and Informatics (ISSN: 0973-4864), 44-48, 2009	Parteek Bhatia and R. K. Sharma	
53	Use of computer based applications: A study at different levels of management	The Icfaian Journal Management Research, 8(7), 45-55, 2009	Khushdeep Dharni, Ravi Kiran and R. K. Sharma	
54	Use of computer applications across functional areas of management	Gyan Management, 2(2), 103-16, 2009	Khushdeep Dharni, Ravi Kiran and R. K. Sharma	
55	Information systems in Indian manufacturing sector: extent of use and support for managerial roles	International Journal of Business Information Systems, 4(6), 673-87, 2009	Khushdeep Dharni, Ravi Kiran and R. K. Sharma	
56	Recognizing online handwritten Gurmukhi characters using comparison of small line segments	International Journal of Computer Theory and Engineering, 9(1), 136-141, 2009	Anuj Sharma, R. Kumar and R. K. Sharma	

### List of research publications in National Journals

S. No.	Title of the paper	Name of the Journal with volume, page nos., year	Name of the authors
1.	Integrability and L1-convergence of Ram-Kumari Sums	Punjab Academy of Sciences, vol 5, 12-16, 2009	Jatinderdeep Kaur and S. S. Bhatia

### Publication of papers in conference proceedings and other publications

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1.	An improved genetic based Routing Protocol for VANETs	Confluence The Next Generation Information Technology Summit (Confluence), 2014 5th International Conference-. IEEE, 2014, pp. 347 - 353.	Rajesh Kumar , Divya Gupta
2.	"Enhanced swarm intelligence-based scheduler to improve QoS for MANETs	Confluence The Next Generation Information Technology Summit (Confluence), 2014 5th International Conference-. IEEE, 2014, pp. 340 - 346	Rajesh Kumar, Priya Sharma
3.	Efficient Scheduling Algorithm based on Priority Scheduling Mechanism in Cloud Environment.	ICCC-2014, Dec. 27-28, Odisha. (Accepted for publication in IEEE)	Jyoti Kumari, Anju Sharma
4.	A Context Sensitive Thresholding Technique for Automatic Image Segmentation	ICCIDM 2014 Conference, VSSUT, Odhisa, India, December 20-21(2014),Computational Intelligence in Data Mining - Volume 2,Smart Innovation, Systems and Technologies Volume 32, 2015, pp 19-25	Anshu Singla, Swarnajyoti Patra
5.	Offline Handwritten Gurmukhi Character Recognition System using RBF-SVM	International Workshop on Document Analysis and Recognition, IISc, Bangalore, 14 DEC 2014 (Accepted for publications in ACM Digital Library).	Munish Kumar, M. K. Jindal and R. K. Sharma
6.	Performance analysis of zone based features for online handwritten Gurmukhi script recognition using support vector machine	In Proc: Progress in Systems Engineering Advances in Intelligent Systems and Computing Volume 330, 747-753, August 2014	Karun Verma and R. K. Sharma
7.	Mobile agent information security in ad-hoc network	April 2014, doi: 10.1109/ICCPEIC.2014.6915343 (IEEE), pp.77-80,	Jasleen Kaur, Sharad Saxena, Anu Jain
8.	Securing mobile agent's information in ad-hoc network	Sept 25-26, 2014, doi: 10.1109/CONFLUENCE.2014.6949352 pp. 442-446, (IEEE)	Jasleen Kaur, Sharad Saxena, Mohd Abuzar Sayeed



S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
9.	Data agglomeration in wireless sensor networks	Dec 11-13, 2014, International Conference on Parallel, Distributed and Grid Computing (PDGC), 2014, pp.285-289 (IEEE).	Sandhu Jasminder Kaur, Saxena Sharad
10.	Challenges and issues in underwater acoustics sensor networks: A review	Dec 11-13, 2014, International Conference on Parallel, Distributed and Grid Computing (PDGC), pp. 251-255 (IEEE).	Jindal Himanshu, Saxena Sharad, Singh Singara
11.	Acoustic communication characteristics in UWDBCSN	Dec 11-13, 2014, International Conference on Parallel, Distributed and Grid Computing (PDGC), pp. 176-180 (IEEE).	Saxena Sharad, Mehta Deepak, Kaur Jasminder, Jindal Himanshu
12.	"Modeling and Performance Estimation of Static Step Topology Under Distributed Environment"	In Proceedings of 101 <sup>th</sup> Indian Science Congress 2014 Held on Feb. 3-7, 2013, University of Jammua, Jammu, India.	Zaidi Taskeen
13.	"Implementation of Bankers' Algorithm for Avoidance of Deadlock Across National Knowledge Network (NKN) through UML"	In Proceedings of International Conference of the 8 <sup>th</sup> INDIACOM on Computing for Sustainable Global Development, (ISBN 978-93-80544-06-9), PP. 745-747, Organised by Bharti Vidyapeeth Institute of Computer Application and Management, New Delhi from 5-7 <sup>th</sup> March 2014	Zaidi Taskeen, Saxena Vipin
14.	Necessary and Sufficient condition for L1-convergence of certain sine sums,	international Conference on Special Functions and their Applications Thapar Institute of Engineering & Technology University, Patiala, 2014 , 27	Sandeep Kaur and Jatinderdeep Kaur
15.	Fixed Point Theorems for $\alpha$ - $\psi$ - contractive mappings,	International Conference on Special Functions and their Applications Thapar Institute of Engineering & Technology University, Patiala, 2014 , 24	Kapil Chawla and Jatinderdeep Kaur.
16.	Rational type in complex valued metric spaces with applications,	International Conference on Special Functions and their Applications Thapar Institute of Engineering & Technology University, Patiala, 2014 , 26.	Priya Shahi, Jatinderdeep Kaur and S.S. Bhatia
17.	Lebesgue Integrability of Fuzzy Trigonometric Sine Series	International Conference on Mathematical Sciences, Sathyabama University, Chennai, 2014, 491-494	Sandeep Kaur and Jatinderdeep Kaur
18.	Analysis of various direction lifting schemes for JPEG2000 Standard	IEEE International Conference on Recent Advances and Innovations in Engineering, Jaipur, May 9-11, 2014, pp 1-6	Chirag Garg and Singara Singh Kasana
19.	Challenges and Issues in Underwater Acoustics Sensor Networks: a review	IEEE International Conference on Parallel, Distributed and Grid Computing, Solan (HP), 16-17 Dec 2014, pp 251-255	Himanshu Jindal, Sharad Saxena, Singara Singh Kasana

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
20.	A Novel Image Zooming Technique Using Wavelet Coefficients	International Conference on Recent Cognizance in Wireless Communication & Image Processing, Jaipur, 16-17 Jan, 2015	Himanshu Jindal, Singara Singh Kasana, Sharad Saxena

### Publication of papers in conference proceedings and other publications

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
1	Optimal, Maintenance of Scheduling of Textile Weaving Process	National Meet of Research Scholars in Mathematical Sciences held at IIT, Roorkee from December 19-23, 2009 (Awarded best paper)	Manwinder Kaur, A. K. Lal, S. S. Bhatia & A. S. Reddy
2	Availability Analysis of Polytube Industry	National conference on mathematical modeling and simulation (MMSim10) held from March 20 - 21, 2010 at Department of Mathematics, Guru Jambheshwar University of Science and Technology, Hissar.	Shakuntala, Rachana Khurana, A. K. Lal, S. S. Bhatia, and Jai Singh,
3	Rearrangement of strokes in recognition of Online Handwritten Gurmukhi words	Published in IEEE Proceedings of 10th International Conference on Document Analysis and Recognition (ICDAR-2009) held at Barcelona, Spain, pp. 1241-1245, July 26-29, 2009.	Anuj Sharma, Rajesh Kumar, R. K. Sharma
4.	Fuzzy Genetic Optimal Control for Four Degree of Freedom Robotic Arm Movement	Published and presented at World Congress on Science, Engineering and Technology held at Bangkok, Thailand pp: 409-412, December 22-25, 2009.	Vijay Banga;Yaduvir Singh;Rajesh Kumar
5	A Heuristic for Multi-Objective Chinese Postman Problem	39th International Conference on Computers and Industrial Engineering University of Troyes, Troyes, France DOI:10.1109/ICCIE.2009.5223529	M. K. Sharma Satya Prakash; Amarinder Singh;
6	An Efficient Heuristic for Multi-Objective Bulk Transportation Problem	39th International Conference on Computers and Industrial Engineering University of Technology of Troyes, Troyes, France DOI:10.1109/ICCIE.2009.5223526	M. K. Sharma Satya Prakash; Amarinder Singh;
7	Mathematical Modelling of HIV/TB Coinfection: Effect of Treatment and Awareness",	Proceeding of International Conference on Challenges and Applications of Mathematics in Science and Technology (CAMIST), p 796-804 (2010).	Navjot Kaur, Mini Ghosh
8	Challenges in Segmentation of Text in Handwritten	BAIP 2010, Kerala, March, 2010, CCIS 70, 2010, 388, Springer-Verlag Berlin Heidelberg 2010	Rajiv Kumar; Amardeep Singh
9	Detection and Segmentation of Lines and Words in Gurmukhi	IEEE 2nd International Advanced Computing Conference, Feb 2010, Thapar Institute of Engineering &	Rajiv Kumar;Amardeep Singh;

S. No.	Title of the paper	Name of the conference with venue, date and year, page nos.	Name of the authors
	Handwritten Text	Technology University, 353, IEEE Xplore Digital Library	
10	Explicit Exact Solutions of a Non Evolution Equation	Interdisciplinary Mathematics on Interdisciplinary Mathematical and Techniques (IMST 2009 - FIM XVIII), August 2-4, 2009	R K Gupta K Singh
11	Modified b-equation: Classical Lie Approach and Exact Solution	Interdisciplinary Mathematics on Interdisciplinary Mathematical and Techniques (IMST 2009 - FIM XVIII), August 2-4, 2009	R K Gupta Sachin Kumar
12	A Priori Error Estimates for a Three-step Taylor Galerkin Finite Element Method for a Time-dependent Singularly Perturbed Convection-Diffusion equation	Indo-German Conference on PDE, Scientific Computing and Optimization in Applications, October 07-09, 2009, IIT Kanpur.	Vivek Sangwan, B. V. Rathish Kumar, S. K. Murthy, Mohit Nigam
13	Integrability and convergence of double sine series	Eighteenth International Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematical and Statistical Techniques (IMST 2009-FIM XVIII) held at JUIT, Solan, August 02-04, 2009.	Jatinderdeep kaur
14	Algorithm for fuzzy efficient solutions for bi-objective warehouse problem	8 <sup>th</sup> triennial Conference of Association of Asian Pacific Operational Research Society held at Jaipuriya Institute of Management, Jaipur Dec. 6-9, 2009.	Amit Kumar, Anila Gupta, M. K. Sharma

### Books/Chapters in Books

S. No.	Name of Book	Month/ Year of Publication	Name of Publisher, Country	Authors	ISBN
1	Computational Intelligence for Big Data Analysis: Frontier Advances and Applications	2015	Springer-Verlag/ Heidelberg	Pritpal Singh	In Press
2	Hybrid Soft Computing Approaches: Research and Applications	2015	Springer-Verlag/ Heidelberg	Pritpal Singh	In Press

3	Software Development Technique for Constructive Information Systems Design: Information System and System Development Life Cycle	2013	IGI Global Publisher, USA pp. 118-127	Monika Sethi, Anju Sharma	
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21. Details of patents and income generated : Nil

22. Areas of consultancy and income generated : Nil

23. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad : **Nil**

24. Faculty serving in a) National committees b) International committees c) Editorial Boards d) any other (please specify)

**Dr. Sharad Sexena Journal Editor (STM Journals)**

- **Journal of Web Engineering & Technology**
- **Journal of Image Processing & Pattern Recognition Progress**
- **Journal of Mobile Computing, Communications & Mobile Networks**

**Dr. Taskeen Jaidi**

- **Expert member of National Institute of Electronics and Information Technology (NIELIT) (DOEACC) (Expert Sl. No.3264), New Delhi;**
- **Expert Member of Indira Gandhi National University (IGNOU), New Delhi**

**Dr. Anju Sharma**

- **TCM of International Conference on Contemporary Computing and Informatics (iCATccT 2014) is being organized in Myore-570 006 Karnataka, India, 2014.**

**Dr. Rupali Bhardwaj**

- **Technical committee member in 3<sup>rd</sup> International Conference on Recent Trends in Computing, SRM University, Modi Nagar , Ghaziabad**

25. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) :

S. No	Name of the Faculty member	Name of the Conference/Workshops/short term programs	Place and Dates
1.	Sanmeet Kaur	Security and Privacy Symposium	from February 13-14, 2015 IIIT Delhi
2.	Dr. Paramjeet Singh	XV International Conference on Hyperbolic Problems	July 27th to August 1st in the Rio de Janeiro, Brazil

S. No	Name of the Faculty member	Name of the Conference/Workshops/short term programs	Place and Dates
3.	Dr. R. K. Sharma	Progress in Systems Engineering Advances in Intelligent Systems and Computing	August 18-24, 2014, UNLV, USA
4.	Dr. Rajesh Kr. Gupta	NCM Workshop on "Conservation Laws with Applications to Continuum Mechanics" organized by National Center of Mathematics and Department of Mathematics, Punjab University, CHD	Department of Mathematics, Punjab University, Chandigarh on 2-7 December, 2014.
5.	Anshu Singla	ICCIDM 2014 Conference	VSSUT, Odhisa, India, December 20-21(2014),
6.	Taskeen Zaidi	"ICT in Higher Education:Need of the Hour";	B. B. Ambedkar University, Lucknow, India, on 20 <sup>th</sup> Jan., 2014
7.	Taskeen Zaidi	"Science Camp under INSPIRE Internship Scheme";	Organised by Bundelkhand University, Jhansi, from January 20-24, 2014.
8.	Taskeen Zaidi	"101 <sup>th</sup> Indian Science Congress";	organized by University of Jammu, Jammu, India, 3-7 Feb. 2014.
9.	Taskeen Zaidi	"National Conference on Recent Trends in Software Engineering Research (RTSER 2014)";	Organised by Shri Ram Murti Smarak College of Engineering and Technology, Bareilly, 8 <sup>th</sup> March 2014.
10.	Taskeen Zaidi	"International Conference on Modeling and Computing (ICMC-2014)";	Organised by Department of Computer Science, Babasaheb Bhimrao Ambedkar University, Lucknow, India from July 10-11, 2014.
11.	Taskeen Zaidi	"National Conference on Recent Advances in Mathematics and Applications";	Organised by Department of Applied Mathematics, Babasaheb Bhimrao Ambedkar University, Lucknow, India from October 30-31, 2014.
12.	M.Rana	18 <sup>th</sup> Punjab Science Academy Annual Conference,	7-9 February, 2015, Desh Bhagat University, Mandi Gobingarh, Punjab, India.
13.	M.Rana	International Conference of Special Functions and Their Applications,	16-18 October, 2014, Thapar Institute of Engineering & Technology University, Patiala, India

**List of various faculty members who attended various conferences/ workshops/ short-term programs in 2013-2014**

S. No.	Name of the Faculty member	Name of the Conference/Workshops/short term programs	Place and Dates
1	Dr. Rajiv Kumar	Embedded System Design using Atmel XMEGA XPLD A1 and ARM based SAM 4L	July 15-16, 2013 at Thapar Institute of Engineering & Technology University, Patiala
2.	Dr. Rajiv Kumar	Applications of MATLAB in engineering	Aug 24-25, 2013 at Thapar Institute of Engineering & Technology University, Patiala.
3	Dr. Rajiv Kumar	Role and Relevance of Ethics & IPR in Dynamic Business Environment	Aug 29, 2013 at Thapar Institute of Engineering & Technology University, Patiala
4	Dr. Rajiv Kumar	Basics and Application of Computational Fluid Dynamics (BCFD-2013	Aug 30-31, 2013 at Thapar Institute of Engineering & Technology University, Patiala
5	Dr. Rajiv Kumar	Introduction to MATLAB	Oct 26-27, 2013 at Thapar Institute of Engineering & Technology University, Patiala.
6	Dr. Rajiv Kumar	Natural Language Processing	Dec 6-7, 2013 at Thapar Institute of Engineering & Technology University, Patiala.
7	Khushneet Jindal	Embedded System Design using Atmel XMEGA XPLD A1 and ARM based SAM 4L	July 15-16, 2013 at Thapar Institute of Engineering & Technology University, Patiala
8	Khushneet Jindal	Applications of MATLAB in engineering	Aug 24-25, 2013 at Thapar Institute of Engineering & Technology University, Patiala.
9	Khushneet Jindal	Role and Relevance of Ethics & IPR in Dynamic Business Environment	Aug 29, 2013 at Thapar Institute of Engineering & Technology University, Patiala
10	Khushneet Jindal	Basics and Application of Computational Fluid Dynamics (BCFD-2013	Aug 30-31, 2013 at Thapar Institute of Engineering & Technology University, Patiala
11	Khushneet Jindal	Introduction to MATLAB	Oct 26-27, 2013 at Thapar Institute of Engineering & Technology University, Patiala.

S. No.	Name of the Faculty member	Name of the Conference/Workshops/short term programs	Place and Dates
12	Khushneet Jindal	Natural Language Processing	Dec 6-7, 2013 at Thapar Institute of Engineering & Technology University, Patiala.
13	Khushneet Jindal	Advance Topics in Fluid Flow and Heat Transfer	Sep 17-18, 2013 at Thapar Institute of Engineering & Technology University, Patiala
14	Khushneet Jindal	Hands on Training on Computational Fluid Dynamics (CFD-2013)	Oct 18-20, 2013 at Thapar Institute of Engineering & Technology University, Patiala
15	Khushneet Jindal	Multilingual Technologies	Nov 11-17, 2013 at Punjabi University, Patiala
16	Taskeen Jaidi	Science Camp under INSPIRE Internship Scheme	Bundelkhand University, Jhansi, from January 20-24, 2014
17	Dr. Vivek Sangwan	Mathematical Foundation of Advanced Finite Element Methods	BITS Goa campus organized by Dept. of Mathematics, IIT Bombay, 2013
18	Dr. Vivek Sangwan	Workshop on Optimization with PDE constraints	TIFR Bangalore, 2013
19	Dr. Sharad Saxena	Induction Training Programme	NITTTR Chandigarh, Jan 20-24, 2014
20	Dr. Sharad Saxena	Role and Relevance of Ethics and IPR in Dynamic Business Environment	Thapar Institute of Engineering & Technology University, Patiala, 2013
21	Dr. Sharad Saxena	Natural Language Processing	Dec 6-7, 2013 at Thapar Institute of Engineering & Technology University, Patiala.
22	Dr. Rajesh Gupta	Basics and Application of Computational Fluid Dynamics (BCFD-2013)	Aug 30-31, 2013 at Thapar Institute of Engineering & Technology University, Patiala
23	Dr. Rajesh Gupta	Introduction to MATLAB	Oct 26-27, 2013 at Thapar Institute of Engineering & Technology University, Patiala.
24	Dr. Rajesh Gupta	Applications of MATLAB in Engineering	Thapar Institute of Engineering & Technology University, Patiala on 24-25 August, 2013
25	Dr. Rajesh Gupta	Hands on Training on Computational Fluid Dynamics" (CFD-2013)	Thapar Institute of Engineering & Technology University, Patiala held on 18-20 October 2013
26	Dr. Rajesh Gupta	Embedded System Design using Atmel XMEGA XPLD A1 and ARM based SAM 4L	Atmel India University Program at Thapar Institute

S. No.	Name of the Faculty member	Name of the Conference/Workshops/short term programs	Place and Dates
			of Engineering & Technology University, Patiala from 15-7-2013 to 16-07-2013
27	Dr. Rajesh Kumar	Curriculum Design	Thapar Institute of Engineering & Technology University, Patiala held on April 12, 2013
28	Dr. Rajesh Kumar	International Conference on Issues and Challenges in Intelligent Computing Techniques	KIET, Ghaziabad from Feb. 7-8, 2014

**List of various faculty members who attended various conferences/ workshops/ short-term programs in 2012-2013**

S. No.	Name of the Faculty member	Name of the Conference/Workshops/short term programs	Place and Dates
1	Dr. Abhishek Kumar Singh	National Conference on Recent Advances in Mathematics and its Applications	Department of Applied Mathematics, Indian School of Mines, Dhanbad, Feb 14-16, 2013
2	Dr. Anju Sharma	Think Parallel: Parallel Programming for Engineers and Scientists	CDAC- Bangalore, 10-20 June, 2013
3	Dr. Ram Jiware	New Frontiers in Numerical Analysis and Scientific Computing (Conference)	Kent State University, USA, April 17-18, 2013
3	Dr. Ram Jiware	NUMDIFF-13 (2012) Conference & Symposium	Martin-Luther University, Halle, GERMANY, Sep 10-14, 2012
4	Dr. Anju Sharma	International Workshop on Cloud Computing and HPC (CCHPC-2012) Computer Science and Engineering Department	Thapar Institute of Engineering & Technology University, Patiala 05 - 08 December, 2012
5	Dr. Rajesh Kumar	National Conference (RIET-12)	Amritsar College of Engineering & Technology, Amritsar from August 17-18, 2012

**List of various faculty members who attended various conferences/ workshops/ short-term programs in 2011-2012**

S. No.	Name of the Faculty member	Name of the Conference/Workshops/short term programs	Place and Dates
1	Dr. Meenakshi Rana	International conference of special functions and applications (ICSFA)	SVNIT, Surat, Gujarat, 27-29 June, 2012.
2	Dr. Abhishek Kumar Singh	Staff Development Programme on "Disaster Prevention and Mitigation"	Department of Civil Engineering, Thapar Institute of Engineering & Technology University, Patiala (Sponsored by AICTE) , 28 May - 8 June, 2012



S. No.	Name of the Faculty member	Name of the Conference/Workshops/ short term programs	Place and Dates
3	Dr. Ram Jiwari	Workshop on wavelets	IIT Bombay, 28 Feb - 2 March, 2012
4	Dr. Ram Jiwari	Workshop on Differential Equations and Mathematical Modelling	Delhi University, Feb 9 - Feb 11 , 2012
5	Ms. Sunita Garhwal	Staff Development program on Disaster Prevention and Mitigation	Thapar Institute of Engineering & Technology University, Patiala May 28 - June 8, 2012
6	Dr. Vivek	Staff Development Programme on "Disaster Prevention and Mitigation"	Department of Civil Engineering, Thapar Institute of Engineering & Technology University, Patiala (Sponsored by AICTE) , 28 May - 8 June, 2012
7	Khusneet Jindal	IBM SPSS training program	Dec 14-17, 2011 at Thapar Institute of Engineering & Technology University, Patiala
8	Dr. Rajesh Kumar	International Conference on Issues and Challenges in Networking, Intelligence and Computing Technologies (ICNICT, 2011)	KIET from September 2-3, 2011

**List of various faculty members who attended various conferences/ workshops/ short-term programs in 2010-2011**

S. No.	Name of the Faculty member	Name of the Conference	Place and Dates
1	Dr. Meenakshi Rana	98th Indian Science congress	SRM University, Chennai, India 3-7 January, 2011
2	Dr. Amit Kumar	International congress on Productivity, Quality, reliability, optimization and Modelling	ISI, Delhi, 2011
3	Dr. A. K. Lal	14th Punjab Science Congress	February 7-9, 2011, held at SLIET, Longowal
4	Dr. S. S. Bhatia	14th Punjab Science Congress	February 7-9, 2011, held at SLIET, Longowal
5	Dr. A. K. Lal	Sixth International Conference on Dynamic Systems and Applications	May 25-28, 2011 , Morehouse College, Atlanta, Georgia, USA , 2011
6	Dr. Anju Sharma	Research Promotion Workshop on Introduction to Graph and Geometric Algorithms	Thapar Institute of Engineering & Technology University 28-30 October, 2010

**List of various faculty members who attended various conferences/ workshops/ short-term programs in 2009-2010**

S. No.	Name of the Faculty member	Name of the Conference	Place and Dates
1	Mahesh Kumar Sharma	39th International Conference on Computers and Industrial Engineering	University of Technology of Troyes, Troyes, France July, 2009
2	Jatinderdeep Kaur	Eighteenth International Conference of Forum for Interdisciplinary Mathematics on Interdisciplinamathematical and Statistical Techniques	Solan, August 02-04, 2009
3	Ankush Pathania	Workshop cum training programme on " <i>Modern Trends in Celestial Mechanics and Astronomy</i> " (WMTCA)	Delhi University (DU), New Delhi, March 17 - 19, 2010.
4	Mr. Khushneet Jindal	ABAP programming workshop, organized by SAP India Pvt. Ltd.	CISIT, Bhubaneswar, Orissa. From 21 <sup>st</sup> -23 <sup>rd</sup> July' 2010
5	Dr. Rajesh Kumar	Introduction to Graphs and geometric Algorithms	Jan. 22-24, 2009 at BITS Pilani

26. Student projects:

**percentage of students who have done in-house projects including inter-departmental projects 100% M.Sc. (Maths & Computing), M. Tech (CSA) students percentage of students doing projects in collaboration with other universities/industry / institute 100% MCA students**

27. Awards / recognitions received at the national and international level by Faculty Doctoral/ post doctoral fellows Students:

1. **Dr. Deepak Gumber (Faculty) received UGC Research Award for showing excellence in research field with 2 year fellowship (Equivalent to salary) and 3 Lakhs research grant for duration Jan 2014 -Jan 2016.**
2. **Khushwant Singh Chahal (Ph.D. Student) got Young Scientist Award in Mathematical Sciences Category in 14<sup>th</sup> Punjab Science Congress, SLIET, India, 9 Feb 2011**

28. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any:

- **Five Day Training Programme on "Data Warehouse and Data Mining " on October 3-7, 2009 sponsored by DST.**

- Inspire Programme for the scientific growth of students of Class 12<sup>th</sup> jointly organized by SMCA and SPMS of Thapar Institute of Engineering & Technology University sponsored by DST.
- Workshop on “Java Learning Program” from Dec. 22, 2008 to Jan. 3, 2009 for Faculty, Students and Employees of the Thapar Institute of Engineering & Technology University at Computer Centre, TU, Patiala.
- Workshop on “A course on java and Advanced Java” from Dec. 20, 2010 to Dec. 31., 2010 for Faculty, Students and Employees of the Thapar Institute of Engineering & Technology University at Computer Centre, TU, Patiala.
- Workshop on “MAD using Andriod” June 2 - 8, 2014 at SMCA, Thapar Institute of Engineering & Technology University, Patiala.
- Two-Day "SAP HANA & APAP for HANA" workshop sponsored by SAP India Pvt. Ltd. from 9th-10th June, 2014 at SMCA, Thapar Institute of Engineering & Technology University Patiala  
 “International Conference of Special Functions and Their Applications”, 16-18 October, 2014, Thapar Institute of Engineering & Technology University, Patiala, India. (The information of the conference was also available on AMS and SIAM website.

29. Code of ethics for research followed by the departments:

- The school gives high priority to research as one of its most important contributions to the society.
- The faculty and the students of the school strive for the highest standards of excellence and morality in any research activities.
- The endeavour to publish in reputed journals, as such the ethical norms followed in these journals are fully complied with and efforts are made to teach research students to create awareness of copyright and Plagiarism.
- The University has ethical committee and approval is required for conducting experiments/ tests on human beings.
- Two research papers in SCI Journals before submission of PhD
- No weightage to papers published in paid SCI journal
- Paper has to be properly reviewed
- Anti-plagrisim software certificate or clearance is required before submitting the thesis of M.E./MTECH/ Ph.D.

30. Student profile programme-wise:

	BRANCH	YEAR	APPLICATION RECEIVED	SELECTED		PASS PERCENTAGE	
				MALE	FEMALE	MALE	FEMALE
MTECH	CSA	2014	254	15	14		
	BRANCH	YEAR	APPLICATION RECEIVED	SELECTED		PASS PERCENTAGE	
				MALE	FEMALE	MALE	FEMALE
MSC	MATH	2014	72	0	20		
MCA	BRANCH	YEAR	APPLICATION	SELECTED		PASS PERCENTAGE	

			RECEIVED	MALE	FEMALE	MALE	FEMALE
		2014	266	19	31		
MCA-2YEAR		2014	115	8	16		
BE/Btech	BRANCH	YEAR	APPLICATION RECEIVED	SELECTED	PASS PERCENTAGE		
				MALE	FEMALE	MALE	FEMALE
	SEM	2014	14908	36	13		

31. Diversity of students:

PROG	BRANCH	YEAR	% OF STUDENTS FORM THE SAME UNIVERSITY	% OF STUDENTS FORM THE OTHER UNIVERSITIES WITHIN THE STATE	% OF STUDENTS FORM UNIVERSITIES OUTSIDE THE STATE	% OF STUDENTS FORM OTHER COUNTRIES
	BRANCH	YEAR				
MSC	MATH	2014	0	75	25	0
MCA	BRANCH	YEAR				
	MCA	2014	0	46	44	0
	MCA (2 YEAR)	2014	0	60	40	
MTECH	CSA	2014		17	83	
BE/Btech	SEM	2014	0	46	54	0

32. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

**06 students of M.Sc. have cleared JRF/NET so far.**

33. Student progression:

Student Progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil.	NA
PG to PhD	10%
PhD to Post-Doctoral	10-12%
Employed • Campus Selection • Other than Campus recruitment	To be provided as combined list by Placement officer
Entrepreneurs	To be provided as combined list by Placement officer

34. Diversity of staff:

<b>Percentage of faculty who are graduates</b>	
of the same university	5/40
from other universities within the State	11/40
from universities from other States	24/40
from universities outside the country	0

35. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period: **Seven**

36. Present details of departmental infrastructural facilities with regard to

**a) Library**

**No. Books. : 116**

**E-journals (all journals through UGC INFONET, Elsevier Science, IEL, Springer, Wiley, Taylor & Francis etc.)**

**b) Internet facilities for staff and students University is Wi-Fi (Academic, Hostels, Faculty Accommodation etc.)**

**c) Total number of class rooms:**

**The classrooms are centralized at university level; however 8 numbers of classrooms are allocated to the department for conducting classes.**

**d) Class rooms with ICT facility: N.A. (Pl. check with University Time table coordinator)**

**e) Students' laboratories : 3**

**Infrastructure & facilities**

**Laboratories**

- Computer Applications Lab-I & Lab-II with 60 Intel Core i5 machines for M.Tech(CSA), MCA & other programmes of the school.
- Numerical Analysis laboratory with 30 Intel Core2 Duo machines for M.Sc. & B.Tech programmes.
- Two New computer LABs with 60 Intel Core i7 machines are under implementation

**Computer Applications Lab-I and Lab-II equipped with Core i5 machines**

**Major equipment (Including Software)**

**Quantity / Licenses**

- |   |     |
|---|-----|
| • SAP ERP UCC Academic Alliance (ABAP)                | 400 |
| • Microsoft Office Prof. 2010                         | 60  |
| • Rational Suite Enterprise Edition                   | 50  |
| • IBM SPSS Statistics 20.0 (Base + Seven Modules)     | 30  |
| • Red hat Linux Enterprise Server 5 Academic Alliance | 01  |
| • MSDN Academic Alliance 7.0                          | 01  |
| • HP DL180 G6 Intel Xeon E5640 Servers                | 04  |
| • LCD projector                                       | 02  |
| • HP Scanjet 5590                                     | 01  |
| • GSM Board Programming Kit                           | 06  |

- RFID Kit 04
- WIFI Kit 06
- Bluetooth Kit 02
- Android Tablet 30

### Numerical Analysis laboratory (NALAB) equipped with Intel Core 2 Duo machines

Major equipment (Including software)	Quantity / Licenses
• Dell PowerEdge 2900 & 1800 series Xeon Dual Processor Servers	- 02
• LCD projector	- 01
• HP LaserJet Multifunction Network printer	- 01
• Red hat Linux Enterprise Server 5 Academic Alliance	- 01
• Microsoft Office Prof. 2003	- 10
• Microsoft Office Prof. 2010	- 10
• Mathematica 6.0	- 25 Network
• + 25 Individual Licenses	

#### f) Research laboratories: Nil

37. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/university

b) from other institutions/universities

#### Ongoing Ph.D.

Sr. No.	Student	Supervisor(s) and doctoral committee members
1.	Mr Vikas Verma (950811005) (Part Time) (URB 22-09-2009) (An efficient framework for web personalization)	<b>Dr S S Bhatia</b> <b>Dr A K Verma</b> Dr R K Sharma Dr Maninder Singh
2.	Ms Geeta Kasana (950811009) (Part Time) (DOA 19-01-2009) (URB 02-06-2010) (Design and analysis of wavelet based stegnography algorithms for JPEG 2000)	<b>Dr S S Bhatia</b> <b>Dr Kulbir Singh</b> Dr M K Sharma Dr Anil Verma
3.	Ms Nueafun Pimwong (950911013) (Part Time) (URB 06-07-2010) (Improving quality of service through buffer optimization in VOIP networks)	<b>Dr R K Sharma</b> <b>Dr Sakshi Kaushal</b> Dr Rajesh Kumar Dr Deepak Garg
4.	Ms Palika Chopra (950911002) (Part Time) (DOA June 2009) (URB 27-07-2010) (Neuro-computing techniques for prediction of compressive strength of concrete)	<b>Dr R K Sharma</b> <b>Dr Maneek Kumar</b> Dr Naveen Kwatra Dr Deepak Garg
5.	Mr Vijender Singh (950811003) (Part Time) (DOA 26-08-2008) (URB 14-10-2010) (An efficient algorithm for frequent patterns in graph mining)	<b>Dr Deepak Garg</b> Dr R K Sharma Dr A K Lal Dr Anil Kumar Verma

<b>Sr. No.</b>	<b>Student</b>	<b>Supervisor(s) and doctoral committee members</b>
6.	Mr Neeraj Juneja (950911003) (Part Time) (URB 20-10-2010) (Some soft computing techniques for quality prediction in aspect oriented systems)	<b>Dr Rajesh Kumar</b> <b>Dr P S Grover</b> Dr R K Sharma Dr Amit Kumar Dr V P Singh
7.	Ms Reetu Gupta (900911016) (Regular) (DOA 23-06-2010) (URB 07-10-2011) (An evaluation quality of component based autonomic system)	<b>Dr Rajesh Kumar</b> <b>Dr Avadhesh Kumar</b> Dr R K Sharma Dr Deepak Gumber Dr Deepak Garg
8.	Ms Supriya Kinger (951011005) (Part Time) (URB 27-03-2012) (Energy efficient resource management algorithms for green clouds)	<b>Dr Rajesh Kumar</b> <b>Dr Anju Sharma</b> Dr R K Sharma Dr Inderveer Channa Dr Seema Bawa
9.	Ms Priyanka Vashisht (951011001) (Part Time)(URB 21-10-2011) (Agent based efficient consistency control and replica management in data grids)	<b>Dr Rajesh Kumar</b> <b>Dr Anju Sharma</b> Dr R K Sharma Dr A K Lal Dr Anil Kumar Verma
10.	Mr Ram Paul (950911008) (Part Time) (DOA Jan 2010) (URB 04-10-2011) (Efficient algorithms for image denoising using wavelets)	<b>Dr Rajesh Gupta</b> Dr S S Bhatia Dr R K Sharma Dr Deepak Garg
11.	Ms Poonam Panwar (951011002) (Part Time) (DOA 16-08-2010) (URB 04-10-2011) (Optimal software reliability and optimal multiprocessor scheduling problems)	<b>Dr A K Lal</b> <b>Dr C Mohan</b> Dr M K Sharma Dr Rajesh Gupta Dr Deepak Garg
12.	Ms. Monika Sethi (951111005) (Pat Time) (DOA Dec 2011) ( URB 16-05-13) ( Development of QoS Metrics for Software-as-a-Service)	<b>Dr. Meenakshi Rana</b> <b>Dr. Anju Sharma</b> Dr. R.K. Sharma Dr. Rajesh Kumar Dr. Inderveer Channa
13.	Mr. Jatender Kumar (951111001) (Pat Time) (DOA July 2011) ( URB 16-05-13) ( Improved software reliability growth model using soft computing)	<b>Dr. Rajesh Kumar</b> Dr. R.K. Sharma Dr. Rajiv Kumar Dr. Deepak Garg
14.	Mr. Khushneet Jindal (951211001) (Part Time) (DOA July 2012) (URB 23-9-2013) (Optical Character Recognition of Machine Printed Dogri Language Documents)	<b>Dr. Rajiv Kumar Sharma</b> Dr. R.K Sharma Dr. Sharad Saxena Dr. Sunil Singla
15.	Ms. Anshu Singla (951211003) (Part Time) (Development of advanced techniques for pattern recognition)	<b>Dr. Swarnjyoti Patra</b> Dr. Singara Singh Dr. Sharad Saxena Dr. Prateek Bhatia

<b>Sr. No.</b>	<b>Student</b>	<b>Supervisor(s) and doctoral committee members</b>
16	Mr. Ashok Kumar (901311001) (Regular) (URB 14-08-2014) (Energy-Efficient Resource Allocation in Green Clouds)	<b>Dr. Rajesh Kumar</b> <b>Dr. Anju Sharma</b> Dr. R. K. Sharma Dr. Rajiv Kumar Dr. Inderveer Channa (CSED)
17	Ms. Parminder Kaur (901311002) (Regular) (URB 13-08-2014) (Direction and Differentiation between Human beings and Animals present in same Frame using Thermals Images)	<b>Dr. Rajiv Kumar</b> Dr. R. K. Sharma Dr. Singara Singh Dr. Deepak Garg (CSED)
18	Mr Pankaj Kumar (950911011) (Part Time) (DOA Aug 2010) (URB 29-10-2010) (On generalized convergence and related concept for sequences of Fuzzy numbers)	<b>Dr S S Bhatia</b> <b>Dr Vijay Kumar</b> Dr Amit Kumar Dr Meenakshi Rana Dr Rajesh Khanna
19	Mr Sudhir Kumar (951011006) (Part Time) (DOA Jan 2011) (URB 25-11-2011) (On generalized convergence in sequence spaces)	<b>Dr S S Bhatia</b> <b>Dr Vijay Kumar</b> Dr Deepak Gumber Dr Meenakshi Rana Dr Rajesh Khanna
20	Mr. Sandeep Singh(901111003) (Full Time) [DOA Aug 2011] [URB 17-09-2012] [On Automorphism groups of finitely generated groups]	<b>Dr Deepak Gumber</b> Dr S S Bhatia Dr Meenakshi Rana Dr A.K.Verma
21	Ms. Rashmi (950911014) (Part Time) (DOA 11-01-2010) (URB 29-05-2012) (The geometry of slant lightlike submanifolds)	<b>Dr. S.S.Bhatia</b> <b>Dr. Rakesh Kumar</b> Dr. Deepak Gumber Dr. Meenakshi Rana Dr. Manoj Sharma
22	Ms. Jasdeep Kaur (901211002) (Full Time) (URB 29-01-2014) (Rogers - Ramanujan Type Identities and Combinatorics)	<b>Dr. Meenakshi Rana</b> Dr. Deepak Gumber Dr. Jatinderdeep Kaur Dr. Ajay Kumar (CSED)
23	Mr. Mandeep Singh ( 951211004) (Part Time) (URB 13-03-2014) (On Derivations In Rings)	<b>Dr. Deepak Gumber</b> Dr. Meenakshi Rana Dr. Vivek Dr. Ajay Kumar (CSED)
24	Mr. Rohit Garg (951211006) (Part Time) (URB 13-03-2014) (On Centralizers and Derivations In Rings)	<b>Dr. Deepak Gumber</b> Dr. Meenakshi Rana Dr. Vivek Dr. Ajay Kumar (CSED)
25	Mr Rajeev (950811008) (Part Time) (DOA 19-08-2008) (URB 13-11-2009) (Group theoretic techniques and their applications to some non-linear systems)	<b>Dr S S Bhatia</b> <b>Dr Rajesh Gupta</b> Dr Deepak Gumber Dr Manoj K Sharma
26	Ms Neetu (900911005) (Part Time) (DOA August 2009) (URB 27-07-2010) Efficient methods for solving fuzzy linear	<b>Dr Amit kumar</b> Dr R K Sharma Dr Deepak Garg



<b>Sr. No.</b>	<b>Student</b>	<b>Supervisor(s) and doctoral committee members</b>
	systems)	
27.	Ms Rachana Agarwal (950911006) (Part Time)(DOA 17-8-2009) (URB 25-08-2010) (Reliability based single multi-objective optimization of concrete mix design parameters)	<b>Dr R K Sharma</b> <b>Dr M K Sharma</b> <b>Dr Maneek Kumar</b> Dr Amit Kumar Dr Naveen Kwatra
28.	Ms Rachna (950911010) (Part Time) (DOA June 2010) (URB 27-04-2011) (Stochastic modeling and cost analysis of some industrial systems)	<b>Dr A K Lal</b> <b>Dr S S Bhatia</b> <b>Dr R K Tuteja</b> Dr R K Sharma Dr Ravi Kiran
29.	Mr. Gaurav Gupta (901111001) (Regular) [DOA 18-08-2011] [URB 16-08-2012] [Phased transportation problems in Fuzzy Environment.]	<b>Dr M.K. Sharma</b> <b>Dr Amit Kumar</b> Dr. Sanjeev Kumar Dr Meenakshi Rana Dr Maneek Kumar
30.	Ms. Anjali Verma (901111005) (Regular) ( DOA Dec 2011) (URB 22-02-2013) (Solutions of some nonlinear partial differential equations)	<b>Dr. Ram Jiwari</b> <b>Dr. Satish Kumar</b> Dr. Rajesh Kumar Gupta Dr. Ankush Pathania Dr. Bhupendra Kumar
31.	Mr. Vikas Sharma (951211002) (Part Time) (DOA July 2012) (URB 17-7-2013) (Some Dynamical Problems in Elastic Continua with Micro Structures)	<b>Dr. Satish Kumar</b> Dr. Ankush Pathania Dr. Vivek Dr. Prem Pal Bansal
32.	Ms. Pooja Giotra (95111103) (Part Time) (URB 7-10-13) (Similarity Reductions and Exact Solutions of Some Nonlinear Systems from Mathematical Physics)	<b>Dr. Rajesh Gupta</b> Dr. A.K Lal Dr. Sanjeev Kumar Dr. Manoj Sharma
33.	Ms. Tanupreet Kaur (901211006) (Regular) (URB 10-01-14) (Study on Some Elastodynamic Problems in Materials with Microstructure and with Reinforced Fibres)	<b>Dr. Satish Kumar</b> Dr. Ankush Pathania Dr. Jatinderdeep Kaur Dr. Prempal Bansal
34.	Ms. Bikramjeet Kaur (901211004) ( Full Time) (Symmetry analysis and conservation laws for some systems of nonlinear partial differential equations)	<b>Dr. Rajesh Kumar Gupta</b> Dr. Sanjeev Kumar Dr. Vivek Dr. Manoj Kumar Sharma
35.	Ms. Sukhpreet Kaur (901311004) ( Full Time) (URB 19-8-2014) (Efficient Methods for Solving some Mathematical Programming Problems with Fuzzy Parameters)	<b>Dr. Amit Kumar</b> Dr. Vikas Sharma Dr. Sanjeev Kumar Dr. Ajay Kumar (CSED)
36.	Ms. Tina Verma (901311003) ( Full Time) (URB 19-8-2014) (Methods for Solving Non-cooperative Games with Fuzzy Payoffs)	<b>Dr. Amit Kumar</b> <b>Dr. S. S. Appaddoo</b> Dr. Vikas Sharma Dr. Sanjeev Kumar Dr. Ajay Kumar (CSED)

### PhD Students Registered but URB still not held

S.NO.	STUDENTS NAME	REGN. NO.	STATUS	SUPERVISOR NAME
1	SUMAN SHEOREN	901211003	REGULAR	DR. MAHESH KR. SHARMA DR. RAMJIWARI
2	SANTOSH KUMAR	901311010	REGULAR	DR. PARAMJEET SINGH
3	JEEVAN JOT KAUR	901311011	REGULAR	DR. AMIT KUMAR
4	HARWINDER KAUR	901311012	REGULAR	DR. AMIT KUMAR
5	GAGANDEEP KAUR	901311008	REGULAR	DR. MAHESH KR. SHARMA
6	TARUN KUMAR	901311006	REGULAR	DR. A. K. LAL DR. ANKUSH PATHANIA
7	KOMAL SINGLA	901311009	REGULAR	DR. RAJESH KR. GUPTA
8	POOJA DHAWAN	901411002	REGULAR	DR. JATINDERDEEP KAUR DR. SANJEEV KUMAR
9	DIPTY SHARMA	901411003	REGULAR	DR. PARAMJEET SINGH
10	SONIA	901411004	REGULAR	DR. JATINDERDEEP KAUR DR. SANJEEV KUMAR
11	JASMINDER KAUR SANDHU	901411005	REGULAR	DR. SHARAD SAXENA
12	ISHA SINGLA	901411006	REGULAR	DR. SINGARA SINGH
13	ROOPAM BAMAL	901411008	REGULAR	DR. SINGARA SINGH
14	HIMANSHU JINDAL	901411009	REGULAR	DR. SHARAD SAXENA DR. SINGARA SINGH
15	MONIKA BHARTI	901411011	REGULAR	DR. RAJESH KUMADR. SHARAD SAXENA
16	AMANPREET SINGH	901411012	REGULAR	DR. MAINDER KAUR
17	DIVYA KHANNA	901411010	REGULAR	DR. RUPALI BHARDWAJ
18	SANDEEP KAUR	901411013	REGULAR	DR. JATINDERDEEP KAUR DR. S. S. BHATIA

### Completed PhD.

S.No.	Title of Thesis	Name of student & year of award	Supervisor
1	Mathematical Analysis of Reliability and Availability of some Process Industries	Pawan Gupta,2004	Dr. R. K. Sharma
2	Application of Neuro-Computing Paradigms for Prediction of a Certain Class of Real-Life Problems	Adesh Kumar Sharma,2007	Dr. R. K. Sharma
3	Soft Computing Techniques in Distributed Environment	V. P. Singh,2007	Dr. R. K. Sharma
4	Recognition of Degraded Gurmukhi Text	Manish Kumar,2008	Dr. R. K. Sharma
5	Design and Analysis of Metrics for Component-Based Software Systems	Arun Sharma, 2009	Dr. Rajesh Kumar, DR. P S Grover
6	Modeling and Analysis of Traffic Control Mechanisms in ATM Networks	Sakshi Kaushal, 2009	Dr. R. K. Sharma

S.No.	Title of Thesis	Name of student & year of award	Supervisor
7	Online Handwritten Gurmukhi Character Recognition	Anuj Sharma,2009	Dr. R. K. Sharma, Dr. Rajesh Kumar
8	Computer Based Information System (CBIS) in Manufacturing Sector: A study of Procurement, Implementation, Use and Evaluation	Khushdeep Kumar Dharni,2010	Dr. R. K. Sharma
9	Analysis and Design of Metrics for Aspect Oriented Systems	Avadhesh Kumar, 2010	Dr. Rajesh Kumar, DR. P S Grover
10	Analytic and Computational Studies of Structures and Oscillations of Stars and stars in Binary system	Ankush Pathania, 2010	A. K. Lal
11	Modeling and Analysis of Software Reliability using Markovian Method	Navdeep Singh Jaggi, 2010	A. K. Lal, R. K. Bawa
12	Vibrational Stability of Differentially Rotating Gaseous Sphere	Sunil Kumar, 2011	A. K. Lal, V. P. Singh and Rajendra Kumar
13	Multi-objective Optimization Problems With a Bearing on Real Life	Amarinder Singh, 2011	Dr. M. K. Sharma, S. Parkash
14	Duality in mathematical programming under generalized convexity	Navdeep Kailey, 2011	S. K. Gupta, Dr. M. K. Sharma
15	Algorithms for solving some single and multi-criteria decision making problems in fuzzy environment	Anila Gupta, 2012	Dr. M. K. Sharma, Amit Kumar
16	Linear programming problems with generalized fuzzy sets	Pushpinder Singh, 2011	Dr.Amit Kumar
17	Some algorithms for solving transportation problems in fuzzy environment	Amarpreet Kaur, 2012	Dr.Amit Kumar
18	Efficient algorithms for solving some fuzzy network flow problems	Manjot Kaur, 2012	Dr.Amit Kumar
19	Methods for solving linear programming problems with fuzzy parameters	Jagdeep Kaur, 2012	Dr.Amit Kumar
20	Some algorithms for solving scheduling problems in fuzzy environment using CPM	Parmpreet Kaur, 2012	Dr.Amit Kumar
21	Some linear programming techniques in fuzzy environment	Neha Bhatia, 2012	Dr.Amit Kumar
22	Reliability analysis of power systems using fuzzy sets and their extensions	Manjit Verma, 2012	Dr.Amit Kumar, Dr. Yaduvir Singh
23	Symmetries and Exact Solutions of Nonlinear Partial Differential Equations	Mr. Sachin Kumar, 2012	Dr. Rajesh Kumar Gupta, Dr. Karanjeet Singh

S.No.	Title of Thesis	Name of student & year of award	Supervisor
24	Symmetries and Exact Solutions of Einstein Vacuum Field Equations and Einstein Maxwell Equations	Ms. Nisha, 2012	Dr. Rajesh Kumar Gupta
25	Reliability analysis of some industrial systems in crisp and fuzzy environments	Sneh Lata, 2013	Dr. Amit Kumar
26	Lie Group Applications to Some Nonlinear Systems	Ms. Anupma, 2013	Dr. Rajesh Kumar Gupta
27	Group theoretic techniques for solutions of Einstein equations	Ms Lakhveer Kaur 2014	Dr. Rajesh Kumar Gupta
28	UNL Based Machine Translation System for Punjabi Language	Parteek Kumar, 2012	Dr. R. K. Sharma
29	Reliability Modeling and Analysis of Some Industrial Process Systems	Sakuntala 2013	A. K. Lal , S. S. Bhatia
30	On class-preserving automorphisms for finite groups	Hemant Kalra 2013	Dr Deepak Gumber
31	Fitted mesh methods for the numerical solutions of singularly perturbed problems	Vinod Kumar 2013	Dr A K Lal Dr R K Bawa
32	EXISTENCE OF FIXED POINTS FOR SOME MAPPINGS IN VARIOUS SPACES	Ms. Priya Shahi 2014	Dr. S.S. Bhatia Dr. Jatinderdeep Kaur
33	Exact and Numerical Solutions of Nonlinear PDEs	Mr. Vikas Kumar 2014	Dr. Rajesh Kr. Gupta Dr. Ramjiwari
34	Multi-objective optimization of software test cases using Evolutionary and Soft Computing Techniques	Manoj Kumar May 2014	Dr. Rajesh Kumar Dr. Arun Sharma
35	Design and Analysis of Software metrics using soft computing approach	Vijai Kumar August 2014	Dr. Rajesh Kumar Dr. Arun Sharma
36	Speech Analysis And Synthesis Of The Punjabi Language	Surinderpal Singh Dhanjal August 2014	S.S.Bhatia
37	Design And Analysis of Variable Digital Filters Using fractional Fourier Transform	Pooja August 2014	S.S. Bhatia Rajesh Khanna;
38	Deterministic Mathematical Modelling of Tuberculosis and HIV Diseases	Navjot Kaur October 2014	S.S. Bhatia Mini Ghosh;
39	Fixed Point Theorems for Mappings In some Abstract Spaces	Saurabh Manro July 2014	S.S. Bhatia Sanjay Kumar

38. Number of post graduate students getting financial assistance from the university:

2013-14 : 9  
2014-15 : 8

39. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology :

**Yes, looking at need of the requirement of IT industry and after conducting formal faculty meetings and need to start new courses like MTech(CSA), M. Sc. ( Maths & Computing) and BCA-MCA integrated was found.**

40 Does the department obtain feedback from faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? alumni and employers on the programmes offered and how does the department utilize the feedback?

**Yes**

**Department does take the feedback from faculty, students and alumni.**

- a) **It utilizes the feedback from faculty by revising the curriculum from time to time.**
- b) **The feedback from students is taken in the form of SRS (Students Reaction Survey) after the end of each semester for each individual subject they study which helps faculty and department to improve the quality of teaching, curriculum and infrastructure required.**
- c) **The feedback is taken from alumni through informal discussions**  
**The department adopts remedial measures on the basis of the feedback.**

41. List the distinguished alumni of the department (maximum 10):

S. No.	Name of the Alumni	Passing year	Current Position/Achievements	Contact Details
1	Prashant Beniwal	2000	Amdocs, Director	<a href="mailto:prashantb@amdocs.com">prashantb@amdocs.com</a>
2.	Tarun Khemka	2008	Senior Software Engineer, ORACLE India	<a href="mailto:khemkatarun@gmail.com">khemkatarun@gmail.com</a>
3.	Varun Saxena	2008	Huawei Technologies, Technical Project leader	<a href="mailto:Vsaxena.varun@gmail.com">Vsaxena.varun@gmail.com</a>
4	Narinder Kaur	2009	Wipro	<a href="mailto:narinder.kaur47@gmail.com">narinder.kaur47@gmail.com</a>
5	Kamal Goyal	2010	Aricent Technologies	<a href="mailto:kamal.grt143@gmail.com">kamal.grt143@gmail.com</a>
6	Gurdeep Kaur	2010	TCS	<a href="mailto:gwalia07@gmail.com">gwalia07@gmail.com</a>
7	Saurabh Kapoor	2010	Nucleus Software	<a href="mailto:k.saurabh86@gmail.com">k.saurabh86@gmail.com</a>
8	Bharat Gupta	2011	Aricent Technologies	<a href="mailto:Bharatgupta27@gmail.com">Bharatgupta27@gmail.com</a>
9	Honey Sharma	2011	Infogain	<a href="mailto:Honey.gemini6@gmail.com">Honey.gemini6@gmail.com</a>
10	Prateek bansal	2011	Sapient	<a href="mailto:keetarp0123@gmail.com">keetarp0123@gmail.com</a>
11	Divesh Goyal	2012	TCS	<a href="mailto:divesh_goyal76@yahoo.com">divesh_goyal76@yahoo.com</a>
12	Manisha Garg	2012	SEL	<a href="mailto:Mishgarg1@gmail.com">Mishgarg1@gmail.com</a>
13	Sukhwinder	2013	D.E. Shaw	<a href="mailto:mmc.sukhwinder@gmail.com">mmc.sukhwinder@gmail.com</a>

42. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts:

- i) Organised a workshop on “A course on java and advanced java” for faculty, students and employee of the Thapar Institute of Engineering & Technology University at Computer Center, Thapar Institute of Engineering & Technology University, Patiala from Dec 20-31, 2010.
- ii) Lecture delivered by Prof. C. R. Bector, Faculty of Management, University of Manitoba, Canada in 2012.
- iii) Lecture delivered by Prof. Vanita Verma, Department of Mathematics, Punjab University, Chandigarh in 2012.
- iv) Lecture delivered by Prof. R. K. Nagiach, Department of Mathematics, Punjabi University, Patiala in 2011.
- v) LECTURED DELIVERED BY PROFESSOR AMITABH TRIPATHI, IIT DELHI ON ‘COMBINATORICS’ ON SEPTEMBER 13, 2013.
- vi) LECTURED DELIVERED BY PROFESSOR A.K. AGARWAL, EMERITUS SCIENTIST, CSIR DEPT. OF MATHEMATICS, PANJAB UNIVERSITY, CHANDIGARH ON ‘NUMBER THEORY & SPECIAL FUNCTIONS’ ON SEPTEMBER 13, 2013.
- vii) LECTURED DELIVERED BY PROFESSOR V. D. SHARMA, IIT MUMBAI ON ‘GENERAL RELATIVITY’ ON NOVEMBER 11, 2013.
- viii) LECTURED DELIVERED BY PROFESSOR MOHAN K. KADALBAJOO, IIT KANPUR ON ‘NUMERICAL MODELING AND ANALYSIS OF GENERALIZED BLACK-SCHOLES EQUATIONS’ ON NOVEMBER 12, 2013.

43. List the teaching methods adopted by the faculty for different programmes :

- a. **Multimedia- PowerPoint presentations.**
- b. **Problem based learning (for practicals and other courses).**
- c. **Group discussions, Group presentations.**
- d. **Project based learning (to develop inquiry based learning).**
- e. **Skills practices.**
- f. **Use of open courseware.**

44. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored:

- a) **The Head of Dept and the faculty of the department meet frequently by organizing formal meetings in which the objectives of the department, the programmes to be implemented, the achievement of learning outcomes and the remedial measures to be adopted (if relevant) are discussed.**
- b) **Course meeting are done every week to synchronize teaching of bigger courses.**
- c) **Student feedbacks on various programmes are obtained on a regular basis both orally and in writing.**
- d) **Course File (ISO-Standard) are maintained for every subject.**
- e) **Continuous Evaluation System**
- f) **Revision of Courses regularly**

45. Highlight the participation of students and faculty in extension activities:

- Faculty strength has been doubled in last five years.
- Started MTech (Computer Science and Applications) in 2009.
- Established study centre for M.Sc (Mathematics with Applications in Computer Science) programme conducted by IGNOU, New Delhi
- Started B. E. ( Software Engg. & Management) from 2014.

46. Give details of “beyond syllabus scholarly activities” of the department :

Following activities constitute the part of curriculum in addition to normal classroom teaching for MCA/M.Sc.students:

- a) Six months project semester training in the industry with stipend to most of the eligible students.
- b) In built flexibility to specialize in different streams through a system of free professional electives
- c) Finishing school has been part of students training and counseling to make them fit for modern competitive industrial environment. Herein the students are made aware with the various ethical, psychological, professional and personal traits so that they can excel later in their professional life.
- d) In addition to above mentioned activities the regular practices in the department for the overall academic enhancement of the students involves seminars, debates, assignments, projects, and participation in the various students events in India and abroad, for which faculty of the school continuously assist and motivate the students.
- e) The University also makes use of electronic media both in class-room teaching and administrative of the academic activity. All class-rooms have been furnished with latest electronic aids for more effective teaching.
- f) Academics and scholars from all over the world have been invited to the school. The students and the faculty got an opportunity to share the views of the luminaries of the world.

The objective of the Counseling Cell is to help students in overcoming their specific problems related to academics, physical, psychological etc. For general counseling, students can approach any member of the counseling team with their problems. A committee of faculty members of SMCA counsels weak students (around nine to ten students) per semester on the basis of their performance in the examination. It was observed that these students have improved their performance.

47. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details:

**MCA and M. Tech. ( CSA) are AICTE approved**

48. Briefly highlight the contributions of the department in generating new knowledge, basic or applied:

**SMCA faculty is committed for maintaining high standards in curriculum and computer applications knowledge to the students so essential in the new Information Technology era. For production of quality manpower, it is imperative to work at the cutting edge of science and technology; research and development and exemplary careers in academia and high-tech industries. The faculty of the School is highly qualified with world class research to its credit in the areas of Mathematics and Computer Applications.**

The school offers PG programs leading to

- **M.Tech in Computer Science & Applications (Regular & Part-Time Education mode)**
- **MCA (Regular & Distance Education Mode)**
- **M.Sc. in Mathematics and Computing (Regular Mode)**
- **BCA-MCA Five year Integrated Programme (Regular Mode)**

School also offers doctoral programme in Mathematics and Computer Applications leading to Ph.D degree. Further school is also engaged in imparting instructions in core courses on Mathematics to UG and PG students of the whole University.

**Objectives**

- **To accomplish proficiency through exposure of knowledge and provision of sound academic platform for IT professionals**
- **To promote Industry-University interaction through consultancy/ project semester.**
- **To promote the research activities in the field of Mathematics and its applications in Computer Science.**

49. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

**SWOC Analysis**

**Strengths**

- 1) **Running core courses of Mathematics for BE/ BTech students.**
- 2) **Well established programmes like Masters in Computer Applications, MTech(Computer Science and Applications) and MSc (Maths and Computing) .**
- 3) **Well established infrastructure: Good lab facilities and basic instrumentation for conducting both undergraduate and postgraduate practicals and research projects.**
- 4) **Quality teaching reflected in high SRS (Student Reaction Survey) scores.**
- 5) **Well qualified faculty members.**
- 6) **Good student-teacher ratio.**
- 7) **Placements in reputed companies with handsome packages.**
- 8) **Research oriented environment**
  - a. **Publications(2009-13):**



- b. PhDs completed/Ongoing:
- c. Projects Completed/Ongoing:
- 9) Mentoring of students on career, academic and personal issues.
- 10) Good working atmosphere in the school.

#### Weaknesses

- 1) Less number of Conferences and Workshops organized in this time span.
- 2) Less Interdisciplinary work.
- 3) Few Research and Development Projects.

#### Opportunities

- 1. Research opportunities:
  - a. More publications in refereed journals to be made.
  - b. More projects to be written.
  - c. Non PhD faculty members to be encouraged to complete their PhDs.
- 2. Collaboration with more industries to increase the exposure of students to the real world scenario.

#### Challenges

- 1. To provide Quality and research oriented education to students.
- 2. To find ways and means to survive the competition and increase number of quality-student intake.

#### 50. Future plans of the department:

- To organize one International Conference, two National Conferences, two to three Refresher Courses and two to three Workshops
- To Encourage faculty members and PhD students to write new projects.
- To encourage faculty members for higher studies and to publish quality research in reputed journals.
- Invited Lectures by the speakers from the Institute of repute.