

CURRICULUM - VITAE OF Prof. AMIT KUMAR SAXENA

Personal Profile

Full Name : **AMIT KUMAR SAXENA**
Date of Birth : 01-07-1965 (1st July 1965)
Highest Qualification: Ph.D. Computer Science (1998)
Teaching Experience: 25 Years: In India and abroad
Permanent Position : Professor
Dept of Computer Science and Information
Technology Guru Ghasidas University, Bilaspur C.G.
(A Central University) (www.ggu.ac.in) India

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Academic Profile

- Awarded Ph.D. (Doctorate) degree in Computer Science in 1998, thesis titled **“Efficient Computations of DSP Problems using Artificial Neural Network Techniques”** from Guru Ghasidas University, Bilaspur (www.ggu.ac.in) India).
- 3- Years professional Master degree program Master in Computer Application (MCA) from M.I.T.S., Gwalior, Jiwaji University, India (www.jiwaji.edu) in 1990 with First Division and with a Distinction securing 75.4% marks
- Master of Science. in Mathematics from Bundelkhand University, Jhansi, India (www.bundelkhanduniv.org) in 1986 with First Division, 70.5% marks
- Graduated (Bachelor of Science) from B. B. College, Bundelkhand University, India (<http://www.bundelkhanduniv.org>) in 1984 with First Division securing 76.4% marks with Physics, Chemistry and Mathematics as major subjects.

Teaching Profile

- **Total Teaching Experience** 25 Years to Graduate and Post Graduate students at University level.
- **Major Courses Taught** - Data Structures, Operating Systems, Computer Programming Languages, C, Software development, Object Oriented Programming, Java, Soft Computing, Concurrent Systems, Data Mining, Information Technology, Computer Networks, Artificial Intelligence, Neural Nets and Fuzzy Logic, Pattern Recognition, Operation Research, Evolutionary Computing

- **Teaching Tools Used** - On line, L C D Projector, OHP, Class Room Teaching, face to face as well as online counseling, in Open University environment.

Research Profile

- **Research Specializations**

- ❖ Artificial Neural Networks and their applications,
- ❖ Soft Computing
- ❖ Data Mining, Rule Extraction from databases
- ❖ Evolutionary Computing, Swarm Intelligence, Particle Swarm Optimization
- ❖ Dimensionality reduction
- ❖ Feature selection in High Dimensional Databases

- **Ph. D. Guidance**

- ❖ Ph.D. Awarded : 02 (One each in 2006 and 2012 respectively)
- ❖ Currently supervising 02 Ph D scholars (Under UGC Regulations 2010)

- **Recent Significant Publications**

A. International Journals

1. (2015) Paper titled “An Improved Polynomial Neural Network Classifier Using Real-Coded Genetic Algorithm”, **IEEE Transaction on Systems, Man and Cybernetics: Systems**, Volume: 45, Issue: 11, Nov. 2015, pp. 1389-1401 .,
2. (2015) Paper titled “Rough Sets: an Overview, Hybridization and Applications”, International Journal of Emerging Science and Engineering™ (IJESE), **ISSN 2319-7378**, Volume-3 Issue 3, January 2015, pp 17-26.
3. (2015) Paper titled “A Review of Particle Swarm Optimization: Feature Selection, Classification and Hybridizations”, International Journal of Recent and Innovation Trends in Computing and Communication, (IJRITCC), **ISSN 2321-8169**, Volume-3 Issue 4, April 2015, pp 1816-1820.
4. (2015) Paper titled “A Survey on Feature Selection Algorithms”, International Journal of Recent and Innovation Trends in Computing and Communication, (IJRITCC), **ISSN 2321-8169**, Volume-3 Issue 4, April 2015, pp 1895-1899.

5. (2014) Paper titled “Rough Sets for Feature Selection and Classification: An Overview with Applications”, International Journal of Recent Technology and Engineering™ (IJRTE), ISSN 2277-3878, Volume-3 Issue 5, November 2014:, pp 62-69.
6. (2013) Paper titled “On the importance of Ensemble of Classifiers”, International Journal of Information Technology, Website: www.bvicam.ac.in (ISSN 0973-5658), Volume 5, No.1, June 2013, pp. 569-576.
7. (2013) Paper titled “Improving the Classification Accuracy with Ensemble of Classifiers”, International Journal of Emerging Technology and Advanced Engineering, Website: www.ijetae.com (ISSN 2250-2459 (Online), An ISO 9001:2008 Certified Journal, Volume 3, Special Issue 2, January 2013, pp. 52-56.
8. (2011) Paper titled “An Evolutionary Feature Selection Technique Using Polynomial Neural Network”, International Journal of Computer Science Issues, (www.IJCSI.org), Volume 8, July, Issue 4(1), Impact Factor 0.242, pp 494-502. <http://www.ijcsi.org/issues.php> , ISSN (print): 1694-0784, ISSN (online): 1694-0814
9. (2011) Paper titled “ Investigating a novel GA-Based Feature Selection Method Using Improved KNN Classifiers”, International Journal of Information and Communication Technology (IJICT), (<http://www.inderscience.com>) published by Inderscience Publishing House, Vol. 3, No. 3, pp. 274-288, ISSN:1741-8070, DOI 10.1504/IJICT.2011.041929.
10. (2010) Paper titled “ Evolutionary methods for unsupervised feature selection using Sammon’s stress function” , Fuzzy Information and Engineering_Volume 2, Number 3, 229-247, DOI: 0.1007/s12543-010-0047-4, Springer, ISSN : 1616-8658 (Print) 1616-8666 (Online) <http://www.springerlink.com/content/1616-8658/2/3/> .
11. (2010) Paper titled “_Dimensionality Reduction with Unsupervised Feature Selection and Applying Non-Euclidean Norms for Classification Accuracy”, International Journal of Data Warehousing and Mining (IJDWM), (<http://www.igi-global.com>) Vol. 6, Issue 2, 2010, pp. 22-40, ISSN: 1548-3924.

B. Papers Published in the Proceedings of International Conferences

1. (2015) Paper titled “Leave One Out Cross Validated GA K-NN Approach For Feature Selection In Classification”, in Proc. International Conference on Emerging Research in Computer Science and Software Engineering, 21 November 2015, R D University, Jabalpur – India, pp 155-159, ISSN NO. 2393-9931

2. (2014) Paper titled “A preprocessed induced partition matrix based collaborative fuzzy clustering for data analysis”, in Proc. IEEE International Conference on Fuzzy System (FUZZ-IEEE), 6-11 July,2014, Beijing, pp 1553-1558, DOI 10.1109/FUZZ-IEEE.2014.6891876. http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6891876
3. (2014) paper titled “Collaborative fuzzy rule learning for Mamdani type fuzzy inference system with mapping of cluster centers” IEEE Symposium on Computational Intelligence in Control and Automation (CICA), Dec. 9-12, 2014, pp 1-6, DOI 10.1109/CICA.2014.7013227, http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=7013227&tag=1
4. (2011) Paper titled “Feature Selection Using Polynomial Neural Networks”, published in the Proc. of SCICT2011 (International Conference on Emerging Trends in Soft Computing and ICT), 16-17 March 2011 at Guru Ghasidas University, Bilaspur India, published by Excellent Publishing House, New Delhi, India, pp 70-73, ISBN – 978-81-920913-3-4.
5. (2008) Paper titled “Novel Approach for the use of Small World Theory in Particle Swarm Optimization”, published in the Proc. of ADCOM2008 (The International Conference on Advances in Computing 2008, 14-17 Dec. 2008 at Anna University, Chennai, India) pp. 363-366, IEEE Press, USA.
6. (2007) Paper titled “Unsupervised Approach for Structure Preserving Dimensionality Reduction”, published in the Proc. of ICAPR07 (The 6th International Conference on Advances in Pattern Recognition 2007) pp. 315-318, ISBN – 13 978-981-270-553-2, 10 981-270-553-8, World Scientific Publishing Co. Pte. Ltd. Singapore

E. Book Authored

1. **Book:** “C Programming – An Introduction”, released in February 2007, ISBN- 13 978-81-88342-93-8; published by Anamaya Publishers, New Delhi, India.

F. Book Chapters

1. (2013) Book Chapter titled “Vertical Collaborative Fuzzy C-Means for Multiple EEG Data Set”, Intelligent Robotics and Applications, Lecture Notes in Computer Science Volume 8102, 2013, pp 246-257, Springer Berlin Heidelberg , http://link.springer.com/chapter/10.1007/978-3-642-40852-6_26
2. (2008) “Evolutionary Approach to Dimensionality Reduction”, Encyclopedia of Data Warehousing and Mining, Second Edition, Vol II pp 810-816, ISBN 978-1-

Resume of Dr. Amit Kumar Saxena
60566-010-3 (hardcover) , ISBN 978-1-60566-011-0 (ebook), IGI Global,2008,
<http://www.igi-global.com/downloads/pdf/Wang810.pdf> .

G. Book Edited

- Proceedings of International Conference on Soft Computing and ICT SCICT-2011 on 16-17 March 2011 at G G Vishwavidyalaya, Bilaspur India, ISBN – 978-81-920913-3-4

Invited Talks /Tutorials

- **Talks at International Level**

- (2015) Soft Computing: A Soft Approach to take hard decisions* At International Conference on Artificial Intelligence, Robotics and Embedded Systems, AIRES 2015 Vishakhapatnam, 17 October 2015.
- (2011) Comprehensive Study on Evolutionary Computing:* At National Chio Tung University, **Taiwan** on 07 Dec 2011.
- (2011) Polynomial Neural Network:* At the Neural Engineering Workshop, organized by Brain Research Center, National Chio Tung University **Taiwan**, on 21 Dec 2011.
- (2008) A glimpse of Evolutionary Computing and Comprehensive demonstration of PSO and GA:* The IAENG International Conference Computer Science and Applications ICCSA 2008, at World Congress of Computer Science and Engineering WCECS 2008, 22-24 October 2008, **San Francisco, USA.**
- (2008) Evolutionary Computation: A Comprehensive Methodology-*At The Twelfth IASTED International Conference on Artificial Intelligence and Soft Computing, ASC 2008, September,1-3, 2008, **Palma de Mallorca, Spain**

Membership of Professional Bodies

- Member of IEEE USA, Computer Science Society.
- Life member of Computer Society of India