


<b>Name</b>	Dr. Nirmala Shivanand	
<b>Designation</b>	Professor and HOD Computer Science and Engineering Department	
<b>Qualification</b>	BE(CSE), MTech(SE), Ph.D(CS).	
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<b>Phone</b>	(08182)276707/08/09 Extn.: 500	
<b>Experience</b>		
<b>1. Research</b>	9 years	
<b>2. Teaching</b>	29 years	
<b>Research areas of interest</b>	Image processing, Pattern Recognition, Document image processing, Image security, Computer Vision and software engineering, Data mining.	
<b>Member of Professional Organization</b>	Life member of ISTE, Fellow member of IETE	
<b>Academic Excellence</b>	<ul style="list-style-type: none"> <li>• Reviewer for Springer Journal Signal Image and Video Processing.</li> <li>• Reviewed research papers for the International conference ACPR 2011(Asian Conference on Pattern Recognition) held at Beijing, China, ICERECT 2012 held at PESCE Mandya, ACPR 2013 held at Japan, ICSIP 2014 held at BNMIT Bangalore, etc.</li> <li>• Chaired the sessions in conferences ICCR 2011 held at DoS in CS Mysore, CEM 2011 at JNNCE Shimoga, ICERECT 2012 held at PESCE Mandya, MPCIT 2013 at JNNCE Shimoga and many more</li> </ul>	
<b>STTP/Workshops/Conferences attended</b>	<ul style="list-style-type: none"> <li>• “Advanced Compilation Techniques”, NMAM Institute of Technology, Nitte, 31-01-2000 to 12-02-2000.</li> <li>• “Component Object Technology(COM,DCOM and CORBA)”, Karnataka Regional college of Engg., Surathkal, 29-01-2001 to 10-02-2001</li> <li>• “Document Image Analysis and recognition”, PES college of Engg., Mandya, 15-07-2002 to 27-07-2002.</li> <li>• “REDHAT LINUX 7.2”, JNN college of Engg., Shimoga, 26-08-2002 to 7-09-2002.</li> </ul>	

	<ul style="list-style-type: none"> <li>• “Advanced Computer Graphics Programming and GUI using Qt. Library and Open GL”, JNN college of Engg., Shimoga, 5-04-2003 to 12-04-2003.</li> <li>• “Recent Advances in Image Processing”, JNN college of Engg., Shimoga, 1-03-2004 to 5-03-2004.</li> <li>• One day workshop on “syllabus framing of Mtech Programme”, under Computer Sc. Board of VTU, at Dr. Ambedkar Institute of Technology , Bangalore, on 30-06-2005.</li> <li>• “National workshop on Cryptology-NWC 2005”, At JNN College of Engg. Shimoga from 12-8-2005 to 14-08-2005</li> <li>• Faculty Training programme held by Accenture under the aegis of the Nasscom IT Workforce Development , from 12-11-2005 to 13-11-2005.</li> <li>• “The Frontier Research Issues in Pattern Recognition and Image Processing”, at New Horizon College of Engg., Bangalore , from 24-03-2006 to 25-03-2006.</li> <li>• International Symposium on “ Cognition and Recognition Technologies-ISCRT’06 “, at PES School of Engg., Bangalore, from 29-12-2006 to 30-12-2006.</li> <li>• “Document Image Processing”, Indian Institute of Science, Bangalore, 2-06-2008 to 12-06-2008</li> <li>• “Linear Algebra and it’s Applications”, JNN college of Engg., Shimoga, 24-01-2011 to 28-01-2011</li> <li>• Attended Researchers Conclave on “ Machine Learning and Computational Intelligence” Held at Adithya Institute of Technology, Coimbatore, 7-8 sept 2012</li> <li>• “Introduction to Robotics” two days workshop conducted by E-Yantra, IIT Bombay at JNNCE, Shimoga, 22-10-13 &amp; 23-10-13.</li> <li>• Workshop on “National Board of Accreditation and Outcome Based Education”, at JNN Coliege of Engg., Shimoga, 23-01-2017 to 27-01-2017</li> </ul>
<b>STTP/Workshops/Conferences Organized</b>	<ol style="list-style-type: none"> <li>1. Organizing member of National Conference NVGIP-05 conducted by department of CS&amp;E, JNNCE, Shimoga.</li> <li>2. Organized ‘PG-Sangama’, a two days intercollegiate technical competitions for PG students of VTU affiliated colleges.</li> <li>3. Organized International Conference MPCIT 2013 (Multimedia processing Communications and information technology 2013) at JNNCE Shimoga, 19-21 Dec ‘2013</li> </ol>

Research Publications	
<ul style="list-style-type: none"> <li>• Journals</li> </ul>	<ol style="list-style-type: none"> <li>1. S. Nirmala and P. Nagabhushan, Automatic Separation of Foreground Text from Complex Background in Color Document images, Journal of Advances in Engineering Science, Section C(3), July- September, pp. 17- 24, 2008.</li> <li>2. P. Nagabhushan and S. Nirmala, Text Extraction in Complex Color Document Images for Enhanced Readability, Journal of Intelligent Information Management, Vol. 2, No. 2, pp. 120-133 , 2010.</li> <li>3. S. Nirmala and P.Nagabhushan, Foreground text Segmentation in Complex Color Document Images using Gabor filters, Journal of Signal, Image and Video processing, Vol. 6, Issue 4, pp. 669-678,2012.</li> <li>4. Jalesh Kumar and S Nirmala, “ Securing information contents of the image – a parallel approach”, Int. J. of Information security, Elsevier publications, Volume 30, October 2016, pp. 105-117. <a href="http://dx.doi.org/10.1016/j.jisa.2016.08.004">http://dx.doi.org/10.1016/j.jisa.2016.08.004</a>, <b>ISSN print:</b> 2214-2126</li> <li>5. Jalesh Kumar and S. Nirmala, “A Novel Approach for Enhancing the Security of Image Contents, International Journal of Multimedia Intelligence and Security”, Inderscience publications (in press). <b>ISSN print:</b> 2042-3462</li> <li>6. Chetan K R and S Nirmala, <i>An efficient and secure robust watermarking scheme for document images using Integer wavelets and block coding of binary watermarks</i>, Elsevier International Journal of Information Security and Applications, Vol. 24-25, Dec 2015, pp. 13-24, DOI:10.1016/j.jisa.2015.07.002</li> <li>7. Chetan K R and S Nirmala, <i>An Adaptive Curvelet based Semi-Fragile Watermarking Scheme for Effective and Intelligent Tampering Classification and Recovery of Digital Image</i>, <b>International Journal of Rough Sets and Data Analysis (IJRSDA)</b> (in Press), ISSN: 2334-4598, DOI: 10.4018/IJRSDA</li> </ol>
<ul style="list-style-type: none"> <li>• Conferences</li> </ul>	<ol style="list-style-type: none"> <li>1. . Nirmala and P. Nagabhushan, Isolating the address foreground in postal images for better readability, Proceedings of Indian Conference on Technologies for Postal Automation (ICTPA), Bagalkot, India, pp. 5-10, Oct. 2007.</li> </ol>

2. S. Nirmala and P. Nagabhushan, Isolation of Foreground-Text in Document Images having Known Complex Background, Proceedings of Second International Conference on Cognition and Recognition (ICCR), Mandya, India, pp. 99-106, Apr. 2008.
3. S. Nirmala and P. Nagabhushan, Separation of Foreground Text from Complex Background in Color Document Images, Proceedings of 7<sup>th</sup> International Conf. on Advances in Pattern Recognition(ICAPR), Kolkata, India, pp. 306-309, Feb. 2009.
4. S. Nirmala and P. Nagabhushan, Text Extraction in Gray scale Document Images having Complex Background, Proceedings of Second International conference on Signal and Image processing (ICSIP), Mysore, India, pp. 440-444, Aug. 2009.
5. S. Nirmala and P. Nagabhushan, Text Extraction in Color Document Images having Complex Background, Proceedings of Fourth Indian International conference on Artificial Intelligence (IICAI), Tumkur, India, pp. 1782-1793, Dec. 2009.
6. S. Nirmala and P. Nagabhushan, Foreground Text Extraction in Color Document Images for Enhanced Readability, Proceedings of Third International conference on Pattern Recognition and Machine Intelligence (PReMI) , IIT Delhi, India, LNCS 5909, pp. 387 – 392, Dec. 2009.
7. S. Nirmala, Alireza Alaei and P. Nagabhushan, Detection and Segmentation of Text Lines in Color Document Images Having Complex Background, Proceedings of Second International conference on Advances in Computer Vision and Information Technology (ACVIT), Aurangabad, India, pp. 185-192, Dec. 2009.
8. S. Nirmala and P. Nagabhushan , Separation of Foreground Text in Document Images having known Complex Color Background –An approach based on Texture Analysis, Proceedings of National conference on FCSIT, Bangalore, India, May 2011.
9. Jalesh Kumar and S. Nirmala, Encryption of Images based on Genetic algorithm– A New Approach, Proceedings of the Second International Conference on Computer Science, Engineering & Applications (ICCSEA 2012), New Delhi, India, pp.783-791,May 25-27, 2012(This paper has appeared in BOOK Series Advances in Intelligent and Soft Computing, 2012,Vol. 167/2012, 783-791, DOI 10.1007/978-3-642-30111-7\_75)
10. Jalesh Kumar and S. Nirmala, A hybrid approach for enhancing the security of information content of an image, (Proceedings of the first International Conference on Multimedia Processing, Communication and Computing Applications(ICMCCA), PESIT Bangalore, India, pp.29 ,Dec 13-15, 2012.), Lecture Notes in Electrical Engineering 213, DOI: 10.1007/978-81-322-1143-3\_14, \_ Springer India, pp.169-180, 2013

- 11.** S Nirmala, P. Naghabhushan and Chetan K R, A New Robust Watermarking Scheme for Document Images by Randomized Distribution of Watermark Segments, Proceedings of Fifth International Joint Conferences on ITC 2014 and PEIE 2014, Chandigarh, India, pp. 382-392, Mar. 2014, DOI: 02.ITC.2014.5.93, (ISBN: 978-94-91587-21-3)
- 12.** Jalesh Kumar and S Nirmala, “A new light weight encryption approach to secure the contents of image”, IEEE 2014 International Conference on Advances in Computing, Communications and Informatics, {ICACCI} 2014, Delhi, India, September 24-27, 2014, pp. 1309-1315. DOI:10.1109/ICACCI.2014.6968400 ISBN 978-1-4799-3078-4
- 13.** Jalesh Kumar and S Nirmala, “ Securing the Document images with Knight Moves and Genetic Approach”, IEEE 2015 International Conference on Advances in Computing, Communications and Informatics, {ICACCI} 2015, Aluva, kerala, India, August 10-13, 2015, pp.1091-1095. ISBN print: 978-1-4799-8790-0.
- 14.** Jalesh Kumar and S Nirmala, “Multi Level Encryption Approach To Secure The Contents Of Image”, NWC 2016, National workshop on Cryptology, JNNCE, Shimoga, August 11-13, 2016.
- 15.** Jalesh Kumar and S Nirmala, “A Novel and Efficient Perceptual Image Encryption based on Knight Moves and Genetic operations”, ICACIE 2016, springer, Bhuvaneshwar, Orissa. December 21-23, 2016.
- 16.** Chetan K R, S Nirmala, *A new fragile watermarking approach for tamper detection and recovery of document images*, International Conference on Advances in Computing, Communications and Informatics (ICACCI-2014), New Delhi, 24-27<sup>th</sup> Sept, 2014, pp. 1494-1498, DOI: 10.1109/ICACCI.2014.6968624, ISBN:978-1-4799-3078-4, Inspec Accession Number: 14779224
- 17.** Chetan K R, S Nirmala, *A novel intelligent robust watermarking scheme for protecting information in document images*, Eighth International Conference on Advances in Pattern Recognition (ICAPR), Kolkata, Jan 4-

18. S Nirmala and Chetan K R, *An intelligent blind semi-fragile watermarking scheme for effective authentication and tamper detection of digital images using Curvelet Transforms*, Second International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS 2015) , Dec 16-19, Technopark, Trivandrum, pp. 199-213
19. Chetan K R and S Nirmala, *A new curvelet based blind semi-fragile watermarking scheme for authentication and tamper detection of digital images*, Third International Conference on Information System Design and Intelligent Applications (INDIA 2016), 8-9 Jan, 2016, Vishakapatnam
20. Chetan K R and S Nirmala, *Intelligent multiple watermarking schemes for the authentication and tamper recovery of information in document image*, 10<sup>th</sup> International Conference on Advanced Computing and Communication Technologies, 18<sup>th</sup> – 20<sup>th</sup> Nov. 2016, Panipat
21. Chetan K R and S Nirmala, *A novel intelligent multiple watermarking schemes for the protection of the information content of a document image*, 2nd Workshop on Computer Vision Applications, 19<sup>th</sup> December, 2016, Indian Institute of Technology, Guwahati.
22. Jalesh Kumar and S Nirmala, *Random selection of Crossover Operation with Mutation for Image Encryption – A New Approach*, 10<sup>th</sup> International Conference on Advanced Computing and Communication Technologies, 18<sup>th</sup> – 20<sup>th</sup> Nov. 2016, Panipat