


CURRICULUM VITAE

Name	Dr. Sanjay Nag	
Qualification	PhD (Tech.) Information Technology (2020) MCA (2009) BSc.(Hons) (1998)	
Designation, Department and School	Associate Professor, Department of Computer Science & Engineering, School of Computer Sciences	
Subject teach	Research Methodology Object Oriented Programming in JAVA Database Management System Data structure in C & C++ Analysis of Algorithms Software Engineering Image Processing (PhD Coursework)	
Research Interest	Pattern Analysis using Machine Learning Computer Aided Diagnostic System Digital Pathology Medical Image Processing Computer Vision & Artificial Intelligence Digital Image Processing	
Experience	Teaching/Research 14+ years Academic Administration	
Publications	Journal 1. Nag S, Basu N, Bose P, Bandyopadhyay SK. (2024) A Novel Grammar-Based Approach for Patients' Symptom and Disease Diagnosis Information Dissemination to Maintain Confidentiality and Information Integrity. Bioengineering (Basel). Dec 13;11(12):1265. doi: 10.3390/bioengineering11121265. PMID: 39768084; PMCID: PMC11673805. 2. Bose, A., & Nag, S. (2022). Green computing – A survey of the current technologies. Asia- Pacific Journal of Management and Technology, 03(02), 01-15. https://doi.org/10.46977/apjmt.2022.v03i02.001 3. Bose, A., & Nag, S. (2022). An overview of the state-of-the-art virtual machine placement algorithms for green cloud data centres. Asia Pacific Journal of Management and Technology, 03(01), 01-12. https://doi.org/10.46977/apjmt.2022v03i01.001	

4. Sanjay Nag and Ms. Nabanita Basu, "Critical Analysis of Malaria Parasite Detection Using Machine Learning Technique", Journal of Medical Imaging and Health Informatics, Vol. 9, pp830–837, 2019. (SCIE)
5. Sanjay Nag and Prof. Samir Kumar Bandyopadhyay, "Malaria Disease Diagnosis- Current Status of CAD Based Approach, Cohesive J Microbiol infect Dis. 1(2). CJMI.000506. 2018.
6. Samir Kumar Bandyopadhyay, Sanjay Nag, Nabanita Basu, "Computer Aided Diagnosis Based Malarial Parasite Detection- A Review", International Journal of Experimental and Clinical Research, Vol 2017, Issue 01, pp 1-34, 2017.
7. Prof. Samir Kumar Bandyopadhyay, Sanjay Nag and Nabanita Basu, "A Review on Biometric Security Systems", World Journal of Engineering Research and Technology, Vol. 2, PP.34 - 45, 2016
8. Mr. Sanjay Nag, Ms. Nabanita Basu and Prof. Samir Kumar Bandyopadhyay, "Detecting Items Hidden Inside a Body", Journal for Research, Vol. 01, PP.1-6, 2016.
9. Sanjay Nag, Roshni Dasgupta, Sayan Dutta, Dr. Indra Kanta Maitra, and Prof. Samir Kumar Bandyopadhyay, "Edge Detection of Digitized Histopathological Slide Images Using Dynamic Thresholding", European Journal of Pharmaceutical and Medical Research, Vol.3, PP.532-537, 2016.
10. Sanjay Nag and Prof. Samir Kumar Bandyopadhyay, "Identification of Malaria Infection Using HSV Colour Model and Dynamic Thresholding with Image Binarization", Innovative Journal of Medical and Health Science, Vol. 6, PP. 31 – 34,
11. Sanjay Nag, Satabdi Bhattacharya, Ranita Banerjee, Dr. Indra Kanta Maitra and Prof. Samir Kumar Bandyopadhyay, "Pseudo-Grayscale Technique: A Pre-Processing Step towards Pathological Slide Analysis", European Journal of Biomedical and Pharmaceutical Sciences, Vol. 3, PP.385-390, 2016.
12. Nabanita Basu, Sanjay Nag, and Prof. Samir Kumar Bandyopadhyay, "Retrieval of Facial Expressions for Facilitating Crime Investigation", Asian Journal of Science and Technology, Vol.07, PP.2381-2387, 2016.
13. Sanjay Nag, Nabanita Basu and Prof. Samir Kumar Bandyopadhyay, "White Blood Cell Segmentation and Malaria", International Journal of Current Medical and Pharmaceutical Research, Vol. 2, PP.202-206, 2016.
14. Samir K. Bandyopadhyay and Sanjay Nag, "Detection of Contour of the element of the WBC for Malaria Detection"-Advances in Computational Sciences and Technology, Volume 8, Number 1 (2015) pp. 7-15, 2015
15. Indra Kanta Maitra, Sanjay Nag, Pradip Saha and Samir K. Bandyopadhyay, "A Tree- based Approach Towards Edge Detection of Medical Image using MDT", International Journal of Computer Graphics Vol. 6, No.1 (2015), pp.37-56, 2015

16. Sudipta Roy, Sanjay Nag, Prof. Samir Kumar Bandyopadhyay, Prof. Debnath Bhattacharyya and Prof. Tai-hoon Kim, "Automated Brain Hemorrhage Lesion Segmentation and Classification from MR Image using an Innovative Composite Method"

Journal of Theoretical and Applied Information Technology, Vol.78. No.1, Pages 35-45, August 2015.

17. Sangita Bhattacharjee, Jashojit Mukherjee, Sanjay Nag, Indra Kanta Maitra and Samir K. Bandyopadhyay, "Review on Histopathological Slide Analysis using Digital Microscopy", International Journal of Advanced Science and Technology, Vol.62, pp.65-96, 2014.

18. Indra Kanta Maitra, Sanjay Nag and Samir K. Bandyopadhyay, "Mammographic Density Estimation and Classification using Segmentation and Progressive Elimination Method", International Journal of Image and Graphics, World Scientific Publishing Company, Vol. 13, Issue 3, pp. 1-19, August 2013.

19. Sudipta Roy, Sanjay Nag, Indra Kanta Maitra and Samir K. Bandyopadhyay, "A Review on Automated Brain Tumor Detection and Segmentation from MRI of Brain", International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 3, Issue 6, pp. 1706-1746, June 2013.

20. Sudipta Roy, Sanjay Nag, Indra Kanta Maitra and Samir K. Bandyopadhyay, "Artefact Removal and Skull Elimination from MRI of Brain Image", International Journal of Scientific and Engineering Research, ISSN 2229-5518, Vol. 4, Issue 6, pp 163-170, June-2013.

21. Indra K Maitra, Sanjay Nag and Samir K. Bandyopadhyay, "Technique for preprocessing of digital mammogram", Computer Methods Programs Biomedicine, Elsevier (CMPB), Vol 107, Issue 2, pp. 97-356, Aug-2012 (SCI-Elsevier)

22. Indra Kanta Maitra, Sanjay Nag and Samir K. Bandyopadhyay, "A Novel Edge Detection Algorithm for Digital Mammogram", International Journal of Information and Communication Technology Research, ISSN 2223-4985, Vol. 2 No. 2, pp. 207-205, Feb 2012

23. Indra Kanta Maitra, Sanjay Nag and Samir K. Bandyopadhyay, "A Computerized Approach towards Breast Volume Calculation", International Journal of Applied Information Systems (IJ AIS), ISSN: 2249-0868, Vol. 1– No.4, pp. 16-20, Feb 2012

24. Indra K Maitra, Sanjay Nag, Biswajita Datta, Samir K. Bandyopadhyay, "Digital Steganalysis: Review on Recent Approaches", Journal of Global Research in Computer Science (JGRCS), ISSN - 2229-371X, Vol. 2, No. 1, pp. 1-5, 2011

25. Indra K Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "Identification of Abnormal Masses in Digital Mammography Images", International Journal of Computer Graphics (IJCG), ISSN 2093-9663, Vol. 2, No. 1, pp. 17-31, 2011
26. Indra K Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "Detection and Isolation of Pectoral Muscle from Digital Mammogram: An Automated Approach", International Journal of Advanced Research in Computer Science (IJARCS), ISSN 0976-5697, Vol.2, No. 3, pp. 375-380, 2011
27. Indra K Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "Accurate Breast Contour Detection Algorithms in Digital Mammogram", International Journal of Computer Applications (IJCA), ISSN 0975-8887, Vol. 25, No. 5, pp. 1-3, 2011
28. Indra K Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "Detection of Abnormal Masses using Divide and Conquer Algorithm in Digital Mammogram", International Journal of Emerging Sciences (IJES), ISSN 2222-4254, Vol. 1, No. 4, pp. 776-786, 2011
29. Indra K Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "Central Tendency of Intensity for Digital Mammogram Registration Comparative Analysis", Journal of Current Computer Science and Technology, ISSN 2231-5411, Vol. 1, No. 6, pp. 329-339, 2011
30. Indra K Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "Artifact Suppression Homogenous Orientation of Digital Mammogram using Seeded Region Growing Algorithm", International Journal of Computer Information Systems (IJCIS), ISSN 2229-5208, Vol. 3, No. 4, pp. 32-38, 2011
31. Indra K Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "Automated Digital Mammogram Segmentation for Detection of Abnormal Masses using Binary Homogeneity Enhancement Algorithm", Indian Journal of Computer Science and Engineering (IJCSE), ISSN 0976-5166, Vol. 2, No. 3, pp. 416-427, 2011
32. Indra Kanta Maitra, Sanjay Nag, Samir K. Bandyopadhyay, "A Novel Edge Detection Algorithm for Digital Mammogram", International Journal of Information and Communication Technology Research, ISSN 2223-4985, Vol. 2 No. 2, pp. 207-215, Feb-2012
33. Indra K Maitra, Sanjay Nag and Samir K. Bandyopadhyay, "Anatomical Segmentation of Digital Mammogram to Differentiate Breast Regions", International Journal of Research and Reviews in Computer Science (IJRRCS), ISSN 2079-2557, Volume 2, Issue 6, pp. 1327-1330, 2011

Book Chapter published

	<ol style="list-style-type: none"> 1. Nag, S., Basu, N., & Bandyopadhyay, S. K. (2017). Hybrid Approach towards Malaria Parasites Detection from Thin Blood Smear Image. In S. Bhattacharyya, A. Mukherjee, I. Pan, P. Dutta, & A. K. Bhaumik (Eds.), Hybrid Intelligent Techniques for Pattern Analysis and Understanding (1st ed., pp. 93-122). Boca Raton, FL: CRC Press. 2. S.Nag, N. Basu & S.K. Bandyopadhyay (2019). Application of Machine Intelligence in Digital Pathology Identification of Falciparum Malaria in Thin Blood Smear Image. In O. P. Verma, S. Roy, S. C. Pandey, & M. Mittal (Eds.), Advancement of machine intelligence in interactive medical image analysis (1st ed., pp. 65-97). Springer Nature. 3. PayaL Bose and Dr. Sanjay Nag, (2024) Healthcare Innovations in Smart Urban Settings, 978-81-974233-0-7 4. Dr. PayaL Bose and Dr. Sanjay Nag (2024) Recommender Systems in Course Selection for Smart Education Technology, 978-81-974233-2-1 5. Dr. PayaL Bose and Dr. Sanjay Nag (2024) Applications of Generative AI in Healthcare and Biotechnology, 978-81-974233-5-2 <p>Patent</p> <ol style="list-style-type: none"> 1. Sudipta Roy, Sanjay Nag, Prof. Samir Kumar Bandyopadhyay, Prof. Debnath Bhattacharyya, and Prof. Taihoon Kim, "Apparatus and method for detecting lesion in brain magnetic resonance image, and computer readable recording medium for implementing the method", United States Patent, Patent No. 20170143207, 2017. <p>Conference Paper</p> <ol style="list-style-type: none"> 1. Indra K Maitra, Sanjay Nag, Samir K Bandyopadhyay and Tai-Hoon Kim, "A Novel Approach to Detect Accurate Breast Boundary in Digital Mammogram using Binary Homogeneity Enhancement Algorithm", IEEE International Conference on Ubiquitous Computing and Multimedia Applications 2011, Hannam University, Daejeon, Korea 2. Suryabrata Das, Payal Bose, Sanjay Nag, Samir Bandyopadhyay, Shawni Dutta. (2024). Innovative Skin Disease Diagnosis: A Hybrid Learning Framework for Skin Cancer Detection. [Conference Presentation Done (26th Dec 2024). Not Published Yet]. Conference Name: 5th International Conference On Computational Intelligence
<p>Academic Awards</p>	<ol style="list-style-type: none"> 1. Computer Aided Detection of Malaria Parasitic using Digitized Thin Blood Smear Slide Images, Invited Speaker in the 105th Indian Science Congress, Engineering Science Section. 16 - 20 March 2018 at Manipur Central University, Imphal. 2. Hybrid Method for Malarial Parasite Detection, Invited Lecture, 22nd February 2017 at Vignan Institute of Information Technology (VIIT), Visakhapatnam, India

	3. Color-Based Segmentation of Thin Blood Smear image to detect Malaria parasite using Unsupervised Clustering, 31st Indian Engineering Congress, The Institution of Engineers (India), Kolkata, 2016, SMART Technologies for Natural Resource Conservation and Sustainable Development
Journal Reviewer	IEEE Access, PlosOne, Elsevier, SpringerNature
Other salient features	Life Member, Indian Science Congress Association
Symposium/Workshop/Conference/Seminar/Webinar	<ol style="list-style-type: none"> 1. Biomedical Instrumentation and Signal Processing, organized by Center of Excellence in Systems Biology and Bio-medical Engineering, University of Calcutta, on 6-7, May 2016 2. Machine Learning and its Applications, organized by Center of Excellence in Systems Biology and Bio-medical Engineering, University of Calcutta, on 11- 16, July 2016 3. Embedded System Design on Altera FPGA Development Board, organized by University of Calcutta in association with Enixs Technologies India Pvt. Ltd. & Pracsol Technologies (I) Pvt. Ltd., on 27-28, October 2016 4. Engineering Sciences and Technologies for Environmental Care (ESTEC 2020), organized by CSIR-NEIST, Jorhat, on 20-22, February 2020
Contact	Mobile No: +91 9903888072 Email Id: sanjayn@svu.ac.in