Profile of Mantosh Biswas

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E-Mail	mbiswas@cs.du.ac.in, mantoshb@gmail.com, mantoshbiswas@nitkkr.ac.in, mantoshbiswas.cse@nitjsr.ac.in
Date of Birth	10th March,1983
Qualification	• B. TECH (Computer Science & Engineering), Birbhum Institute of Engg. & Technology, Suri, Birbhum, (West Bengal University of Technology, W. B.), India in 2006 • M. TECH (Computer Science & Engineering), National Institute of Technology, Durgapur, West Bengal (Deemed University, West Bengal), India in 2008 • PH.D. (Computer Science & Engineering), Indian Institute of Technology (IIT-ISM), Dhanbad, (Deemed University, Jharkhand), India in 2014
Area of Interest	Digital Signal Processing, Digital Image Processing, X-lets, Soft-Computing, Machine Learning.
Theory Subjects	Design and Analysis of Algorithms, Computer Engineering, Automata Theory, Image Processing, Data Structures, Computer Organization and Architecture, Soft Computing, Programming Methodology and File Structures, Operating System, Machine Learning.

Experience

University / College / Institute where employed	Designation	Regular/ Consolidated Salary (from –to)	Total Years & Months
Department of Computer Science, (Faculty of Mathematical Sciences), University of Delhi, Delhi, India.	Associate Professor	May, 2023 – Till Date	
National Institute of Technology, Jamshedpur, Jharkand, India	Assistant Professor (CSE)	September, 2022 – May, 2023	Eight Month's
National Institute of Technology, Kurukshetra, Haryana, India	Assistant Professor (CE)	September, 2013 – Till Date	On Lien
National Institute of Technology, Silchar, Assam, India	Researcher &Teaching Assistant (CSE)	August, 2009 – May, 2011	Twenty One Month's
NIELIT (DOEACC SOCIETY), Aizawl, Mizoram, India	Deputy Engineer	Not Continue	
R.K. Degree College, Silchar, Assam, India	Lecturer (IT)	December, 2008 – August, 2009	Nine Month's
PISJ India Pvt. LTD. Dumdum, Kolkata, W.B., India	Trainee Programmer	September, 2008 – December, 2008	Three Month's
National Institute of Technology, Durgapur, W.B., India	Lab Assistant	July, 2007 – May, 2008	Eleven Month's

R & D Projects

Name	Name of sponsoring agency	Title of project/facilities	Total amount	Date	Status
DEITY, GOVERNMENT	Visvesvaraya PhD Scheme for Electronics & IT	STUDY AND DEVELOPED OF DENOISING METHODS TO ENHANCE THE COLOR IMAGES	Fellowship: lst and 2nd years @ Rs. 31,500/- and 3rd,4th & 5th years @ Rs. 35,000/- with others facilities = 20.16 lakhs	2015	Completed
INDIAN SPACE RESEARCH ORGANISATION	AVIRIS-NG Hyperspectral Airborne Campaign, Space Applications Centre, Ahmedabad	CLASSIFICATION AND FEATURE SELECTION OF AIRBORNE HYPERSPECTRAL DATA FOR CROP COVER MAPPING/URBAN MAPPING	20.00 lakhs	2017-2020	Completed
INDIAN SPACE RESEARCH ORGANISATION	Space Applications Centre, Ahmedabad	FUSION OF OPTICAL AND MULTI-FREQUENCY MULTI-POLARIMETRIC SAR DATA FOR ENHANCED CROP/VEGETATION AND URBAN MAPPING	17.44 lakhs	2017-2021	Completed

Awards/Achievements'	- Certificate for TALENT SEARCH TEST ON GEOGRAPHY. Organized by BBM (Govt of W.B.) in 1998. - State level Certificate for Centre Pedagogical Studies in Mathematics 1998. - Certificate from ACADEMIC SCIENCE CULIURE & PROMOTION SOCIETY Organized by Medha Sandhan Pariksha (Govt of W.B.) in 1998. - Certificate from Diagnostics Test in Mathematics (Govt of W.B.) **GATE Qualified, 2006.** "**Best Paper Award**" on "**An Enhanced Image Denoising Scheme**", ISSN 0973-5836, Vol. 6, No. 1-2, pp. 6-10 in 2nd International Conference Innovative Developments in ICT - Today & Tomorrow, conducted by DAV College, Amritsar (Punjab) organized by: PG Department of Computer Science& IT During 2nd -3rd March, 2013. **BHARAT VIKAS AWARD-2017**, INSTITUTE OF SELF RELIANCE, ODISHA, INDIA - Conducted **High Performance Computing** (HPC) **workshop** on 19th-23rd Sept., 2018 in NIT Kurukshetra - Talk on "**Machine Learning** (UG courses)" of the Engineering College Bikaner, Rajasthan, India on 27th January 2021

Courses/seminars/conferences /Symposiums/Workshop attended	- Workshop on "Digital Image processing and application in VLSI" **at NIT Durgapur Organized by:** Computer Science & Engg. Department, NIT Durgapur in Collaboration with ISI, Kolkata Under TEQIP **During** December 6th–7th, 2007 - Workshop on "Advances in Image and Document Processing" **at IIM, Shillong Organized jointly by:** CVPRU & ISI, Kolkata and RGIIM, Shillong **During** March 16th–20th, 2010 - Participated on "1st International Conference on RECENT ADVANCES IN INFORMATION TECHNOLOGY" **at ISM, Dhanbad organized by:** Computer Science & Engg. Department ISM, Dhanbad **During** 15th–17th March, 2012 - Participated on "The 1st International Symposium on Intelligent Informatics (ISI'12)," **at RMK Engineering college, Chennai (Madras) organized by:** Computer Science & Engg. Department **During** 4th–5th August, 2012 - Participated on "The 2nd International confe rence on COMMUNICATION COMPUTING AND SECURITY (ICCCS-2012)," **at NIT Rourkela, Odisha organized by:** Computer Science & Engg. Department **During** 6th–8th October, 2012 - Participated on "The 19th Annual National Conference on Communications (NCC-2013)," **at IIT Delhi, Delhi organized by:** Electrical Engineering Department **During** 15th–17th February, 2013 - Participated on "The 2nd International Conference Innovative Developments in ICT - Today & Tomorrow," **at DAV College, Amritsar (Punjab) organized by:** PG Department of Computer Science & IT **During** 2nd–3rd March, 2013 - Train the Trainer Workshop on "Agile Software Development" **at NIT Kurukshetra Organized by:** Computer Engineering Department, NIT Kurukshetra in Collaboration with Infosys Limited, Under TEQIP **During** July 17th–19th, 2014 - Participated on IEEE Authorship Workshop titled "How to Publish a Technical Paper with IEEE" **at IIT Delhi, DelhiDuring**11thAugust, 2014 - Participated on "1st International Conference on Recent cognizance in wireless communication & image processing-ICRCWIP-2014," **at Poornima Institute of Engineering and Technology, Jaipur, (Rajasthan) organized by:** Department of Electronics & Communication and Electrical Engineering **During** 16th–17thJanuary, 2015 - Workshop on "Medical Imaging: Techniques & Clinical Applications" **at IIT Delhi, Organized by:** Center for Biomedical Engineering **During** April 3rd–4th, 2015 - Workshop on "Remote sensing of earth and atmosphere" at **ISI Kolkata**, **Organized by:** Center for Soft Computing Research **During** 1st–2nd March, 2016 - Workshop on "Data Science & Machine Learning" at **ISI Kolkata**, **Organized by:** Center for Soft Computing Research **During** 28th–31th March, 2017 - Short Term Course "Land Use Land Cover Modeling Using Open Source" at **IIT Kharagpur**, **Organized by:** Centre for Oceans, Rivers, Atmosphere and Land Science **During** 13th–19th October, 2019
Book Chapters	M. Biswas and H. Om, "Intelligent and Non-Intelligent approaches in Image Denoising: A Comparative Study", edited in Case Studies in Intelligent Computing– Achievements and Trends, pp. 125-160, 2015, CRC Press, Taylor & Francis Group (ISBN 9781138034129). - Ujjawala Yati and Mantosh Biswas, "Wavelet Based Image Fusion Method" edited in Wavelet Theory and Its Applications, accepted, 2018, InTech-open. - Achala Shakya, Mantosh Biswas, and Mahesh Pal, "Classification of Radar Data using Bayesian Optimized Two Dimensional Convolution Neural Network," Radar Remote Sensing, Elsevier, 2022.

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	[39] Achala Shakya, Mantosh Biswas, and Mahesh Pal, "Fusion and Classification of SAR and Optical Data Using Multi-Image Color Components with Differential Gradients," Remote Sensing, MDPI, **(Imp. 5.786),** Vol. 15, Issue 1, pp. 1-15, 2023.
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	[41] Rohit Singh, Mantosh Biswas, and Mahesh Pal "A Transformer based Cloud Detection using Sentinel 2 Imageries over Indian Region," International Journal of Remote Sensing, Taylor & Francis (**Imp. 3.151**), Vol. 44, No. 10, pp. 3194-3208, 2023.
Conference	[1] M. Biswas and H. Om, "Selective Parameters based Image Denoising Method," 1st International Symposium on Intelligent Informatics (ISI'12), Chennai, India, Advances in Intelligent Systems and Computing, Springer, Vol. 182, pp. 325-332, 2012.
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	[3] M. Biswas and H. Om, "An Adaptive Wavelet Thresholding Image Denoising Method," The 19th annual National Conference on Communications (NCC-2013), IIT, Delhi, India, IEEEXplore, pp. 1-5, 2013.
	[4] Sumit Kumar and Mantosh Biswas, "A Survey on Curvelet Transform based Image

Denoising Techniques," International Conference on Futuristic Trends in Computational analysis and Knowledge management (A-BLAZE-2015), Amity University, India, IEEEXplore, pp. 1-6, 2015.

[5] Sumit Kumar and Mantosh Biswas, "New Method of Noise Removal in Images Using Curvelet Transform," IEEE International Conference on Computing, Communication & Automation (ICCCA-2015),Galgotias University, Uttar Pradesh, India, IEEEXplore, pp. 1193-1197, 2015.

[6] Vasagiri Venkata Guruteja and Mantosh Biswas, "Edge Detection: Evaluations and Comparisons," 3rd International Conference on ELECTRONICS AND COMMUNICATION SYSTEMS (ICECS-2016), Karpagam College of Engineering, Tamil Nadu, India, IEEEXplore, pp. 10-15, 2016.

[7] Raghuram Kunsoth and Mantosh Biswas, "Noise Reduction by Various Median Filters: Evaluation and Comparison," International Conference on Emerging Trends in Electrical, Electronics & Sustainable Energy Systems (ICETEESES-16), Kamla Nehru Institute of Technology, Sultanpur, India, IEEEXplore, pp. 1-5, 2016.

[8] Raghuram Kunsoth and Mantosh Biswas, "Modified Decision Based Median Filter for Impulse Noise Removal," International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET 2016), Sri Sivasubramaniya Nadar College of Engineering, Chennai, India, IEEEXplore, pp. 1316-1319, 2016.

[9] Vasagiri Venkata Guruteja and Mantosh Biswas, "Rotating Kernel Transformation Based Edge Detection Using Adaptive Threshold," 3rd International Conference on Electrical, Electronics, Engineering Trends, Communication, Optimization and Sciences (EEECOS-16), SASI Institute of Technology & Engineering, Andhra Pradesh, India, IETXplore, pp, 604-609, 2016.

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[19] Aditya Gautam and M. Biswas, "Edge Detection Method Using ACO with PSO for Noise image," Second International Conference on Computing and Communication (IC3-2018), SMIT, Sikkim, India, Springer, pp. 383-396, 2018.

[20] Shashanka Kalita and M. Biswas, "Improved Convolution Neural Network based Hyper-spectral Image Classification," Second International Conference on Computing and Communication (IC3-2018), SMIT, Sikkim, India, Springer, pp. 397-410, 2018.

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(NERIST), Nirjuli, Itanagar, Arunachal Pradesh, India, pp. 305-315, 2022.

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Professional activities	• **Activity as an Administrative:** *(i) NIT Kurukshetra:* (a) Deputy Center Superintendent (End Semester Examination, 2014-2015) (b) Hostel-7, Warden, NIT Kurukshetra, 2015-2019 (c) Member, Committee for Library, 2014-2019 (d) Nodal Officer, Visvesvaraya PhD Scheme, Since 2015 (e) Nodal Officer, Students Grievance Redressal Portal of the Institute, 2016-2018. (f) Faculty Coordinators for Research and consultancy, NIT Kurukshetra, Since 2017 (g) Coordinator of HPC Centre "PARAM Shavak", NIT Kurukshetra, Since 2017 (h) PG Examination Coordinator, Deptt. of Comp. Engg, NIT Kurukshetra, 2019 to till date (i) Nodal Officer, Students' Credit Card - Scheme, W.B., Since 2021 (j) Hostel-9, Warden, NIT Kurukshetra, 2021 to 2022 *(ii) NIT Jamshedpur:* (a) Coordinator, Computer Center, 2023 (b) Department wise academic and industry relations course structure development committee, 2023 (c) Member, Committee Unnat Bharat Abhiyan Cell, 2023 • **Activity as an Academic:** *(i) NIT Kurukshetra:* (a) Member (Input to the DAC for Reviewing B Tech CO and IT (Curriculum, Syllabi and Scheme) Committee, 2014 & 2019) (b) Member (Input to the DAC for Reviewing M Tech CO (Curriculum, Syllabi and Scheme) Committee, 2014 & 2019) (c) Member (Committee for Proposing New M Tech Program in Network/Cyber Security, 2014) (d) Member (Committee for Documents/Manuals Preparation with the help of other faculty members and HOD, 2014) (e) Member (Departmental Purchase Committee, 2015-2019) (f) Coordinator (B. Tech (IT) Dissertation/Project, 2014-2022) (g) Member (Committee for B. Tech Dissertation/Project, 2013-2014) (h) Member (Committee for B. Tech Summer Training, 2013-2016) (i) Member (Constitution of Departmental Advisory committee (DAC), 2014-2017) (j) Member (Department feedback committee, 2016) (k) Member (Department NBA committee, 2016 (UG) & 2019 (PG)) (l) Member (Department NBA committee, 2020 (UG) & 2020 (PG)) (m) Faculty Supervisor for UG Internship/Industrial Training, 2020 (n) Infrastructure requirement for Dept., 2021 *(ii) NIT Jamshedpur:* (a) Incharge Timetable Committee (CSE Deptt), 2022

	(b) Member (Departmental Master Programme Committee), 2022 (c) Member (Committee for Integrated B.Tech Programme in Data Science and Business Analytics), 2022
Fellowships / Scholarships	• MHRD, Govt. of India Scholarship from July 2006 to May 2008. • MHRD, Govt. of India Scholarship from July 2011 to August 2013. • IIT (ISM) Dhanbad Institute International Travel Grant to attend the conference.
Supervised	• **Ph.D Supervised:** (a) Completed/Submitted – 04 (b) In progress – 01 (Part Time) + 01 (Full Time) = 02 • **M.Tech Dissertation:** Completed = 24 • **B.Tech Dissertation Students Guided (No's):** Completed = 94 • **MCA Dissertation Students Guided (No's):** Completed = 10 • **B.Tech Summer Internship/ Project Work Students Guided (No's):** Completed = 08

June, 2023

Mantosh Biswas
Signature of the applicant