DR OISHILA BANDYOPADHYAY

PhD. (Engg.)

Designation and Affiliation

Assistant Professor, Computer Science & Engineering, Indian Institute of Information Technology Kalyani

Education

a) Ph.D. (2016), Indian Institute of Engineering Science and Technology (IIEST), Shibpur
b) M.E (2008), West Bengal University of Technology in Computer Science & Engineering [1st class, 80%]
c) B.Tech (1998), University of Calcutta, Computer Science & Engineering [1st class, 75.6%]
d) B.Sc. (1995), University of Calcutta, Scottish Church College, Kolkata with Physics (Hons.) [1st class, 68.7%]
e) Higher Secondary (1992), West Bengal Council for Higher Secondary Education [1st division, 67.9%]
f) Secondary (1990), West Bengal Board of Secondary Education [1st division, 78.9%]

Area of Research

Computer Vision, Medical Image Analysis, Digital Geometry

Recent Publications:

Journals:

1. **O. Bandyopadhyay**, A. Biswas, B. B. Bhattacharya, "Bone-Cancer Assessment and Destruction Pattern Analysis in Long-Bone X-ray Images", Journal of Digital Imaging, Springer, doi: https//doi.org/10.1007/s10278-018-0145-0, 2018 (SCIE)
2. **O. Bandyopadhyay**, T. Dutta, N. Dutta, A. Biswas, B. B. Bhattacharya, "Structural Feature Analysis of the Vascular Network in Retinal Images," Computer Methods in Biomechanics and Biomedical Engineering, doi: https://doi.org/10.1080/21681163.2017.1402210 2017 (SCOPUS)
3. **O. Bandyopadhyay**, A. Biswas, B. B. Bhattacharya , "Long-bone Fracture Detection in Digital X-ray Images Based on Digital Geometric Techniques",

Computer Methods and Programs in Biomedicine, Elsevier, volume 123, pp. 2-14, 2016 (SCI)

4. **O. Bandyopadhyay**, B. Chanda, B. B. Bhattacharya, "Automatic Segmentation of Bones in X-ray Images based on Entropy Measure", International Journal of Image and Graphics, World Scientific, volume 16, pp. 1650001-32, 2016 (SCOPUS)
5. **O. Bandyopadhyay**, A. Biswas, B. B. Bhattacharya, "Classification of Long-Bone Fractures based on Digital-Geometric Analysis of X-ray images", Pattern Recognition and Image Analysis: Advances in Mathematical Theory and Applications, Springer, volume 26(4), pp. 742-757, 2016 (SCOPUS)
6. **O. Bandyopadhyay**, A. Biswas, B. B. Bhattacharya, "Automated analysis of Orthopaedic X-ray images based on Digital-Geometric Techniques," ELCVIA Electronic Letters on Computer Vision and Image Analysis, vol. 15(2), pp. 7-9, 2016 (SCOPUS)

Conferences (recent publications):

1. S. Mondal, **O. Bandyopadhyay**, S. Pratihar, "Detection of Concave Points in Closed Object Boundaries Aiming at Separation of Overlapped Objects", IAPR Conference on Computer Vision and Image Processing (CVIP) 2020 (accepted).
2. B. P. S. Bankoti, C. S. Gupta, **O. Bandyopadhyay**, M. Banerjee, "Analysis of Multitasking in Divided Attention using Machine Learning", IEEE Conference on Information and Communication Technology, pp. 1-5, 2019.
3. M. Dasgupta, **O. Bandyopadhyay**, S. Chatterji, "Automated Helmet Detection for Multiple Motorcycle Riders using CNN", IEEE Conference on Information and Communication Technology, pp. 1-4, 2019.
4. S. Mukherjee, S. Chatterji, **O. Bandyopadhyay**, A. Biswas, "Detection of Malaria Parasites in Thin Blood Smears using CNN Based Approach", International Conference on Advanced Computing, Networking, and Informatics (ICACNI), 2019 (accepted)
5. S. Mukherjee, **O. Bandyopadhyay**, A. Biswas, B. B. Bhattacharya, "Detection of Osteoarthritis by Gap and Shape Analysis of Knee Bone X-ray", International Workshop on Combinatorial Image Analysis (IWCIA) , LNCS 11255, pp. 121-133, 2018
6. U. K. Kamila, **O. Bandyopadhyay**, A. Biswas, "Detection of Hemorrhagic region in Brain MRI", International Conference on Communication, Computing and Networking, LNNS 46, pp. 383 – 391, 2018

7. S. Mukherjee, O. Bandyopadhyay, A. Biswas, B. B. Bhattacharya, “Does Rotation Influence the Estimated Contour Length of A Digital Object?”, Pattern Recognition and Machine Intelligence (PReMI), LNCS 10597, pp. 179-186, 2017
8. S. Mukherjee, **O. Bandyopadhyay**, A. Biswas, “Automated Brain Tumor Diagnosis and Severity Analysis from Brain MRI”, International Symposium COMPImage, vol. LNCS 10149, pp. 198 – 207, 2016
9. T. Dutta, N. Dutta, **O. Bandyopadhyay**, “Retinal Blood Vessel Segmentation and Bifurcation Point Detection”, International Workshop on Combinatorial Image Analysis (IWCIA), LNCS 9448 , pp. 261-275, 2015

Publication detail

https://scholar.google.co.in/citations?user=uqWsztYAAAAJ&hl=en

Sponsored Research & Development Project

Automated X-ray Image Analysis using Digital Geometric Approaches funded by DST WOS-A (July 2015-June 2018) as Principal Investigator (Mentor: Prof. B. B. Bhattacharya, ACMU, ISI, Kolkata)

Professional Experience

A. Teaching Experience

1. Indian Institute of Information Technology Kalyani [Oct 2017- till date] (subjects: Algorithm Design and Analysis, Object Oriented Programming (Java), Image Understanding and Computer Vision, Computer Graphics and Multimedia, Software Engineering)
2. Institute of Engineering and Management [August 2016-Oct 2017]
   (subjects: Computer Graphics, Project Management, Algorithms)
3. Camellia Institute of Technology [February 2010-December 2013]
   (subjects: Web Technology, Advanced Java, Software Engineering, Compiler, Automata)
4. National Institute of Technical Teachers Training and Research Kolkata [January 2008 – February 2010]
   (subjects: Multimedia Systems & E-Learning, Web Technology, Software Project Management)

B. Research Experience

DST Woman Scientist(A) 2015 – 2016 at Indian Statistical Institute, Kolkata

C. Industry/Administrative Experience

1. Senior Software Engineer, Skytech Solutions Pvt. Ltd., Kolkata [August 2000-December 2005] (Role: developer, project leader, module coordinator of web based projects using J2EE Technology, Client: United Airlines)
2. Project Officer, West Bengal University of Technology [January 2006 – February 2008] (Role: Implementation of ISRO EDUSAT project for WBUT)
3. Scientific Officer – C, Indira Gandhi Centre for Atomic Research, Department of Atomic Energy, Government of India, Kalpakkam [1999 – 2000] (Design Medical Facility Web Site for IGCAR)

Ph.D. Supervision

- Registered Students: 2 (IIEST, Shibpur)
- Enrolled Students: 3 (IIIT-Kalyani)

Membership

1. IEEE Computer Society
2. Computer Society of India

Reviewer

- Computer Methods and Programs in Biomedicine - Elsevier
- Information Sciences - Elsevier
- IAPR Computer Vision and Image Processing

Personal Detail

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