UNIVERSITY OF NORTH BENGAL
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Raja Rammohunpur, Dist- Darjeeling, West Bengal, Pin-734013, India.

ENLIGHTENMENT TO ERFECTION

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Department of Computer Science and Application

Print

Dr. Ardhendu Mandal

B.S.I.T.(Preston University, U.S.A.), B.C.A.(M. S. University), M.C.A.(BPUT), Ph.D (NBU).

Assistant Professor

Life Member- Computer Society of India (CSI), Indian Society for Technical Education (**ISTE), IAENG, Internet Society.**

ARDHENDU MANDAL

Contact Addresses:

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Subject Specialization: Software Engineering, Object Oriented Analysis and Design, HPC, Data Structures, Operating Systems, Web Technologies.

Areas of Research Interest: Software Engineering, Medical Image Processing, Bioinformatics, Steganography, High-Performance Computing (HPC).

No. of Publications: **(a) Journal(s) :** 15   **(b) International Conferences:** 02   **(c) National Conferences:** 04   **(d) Others(***Seminar/Workshop/Competition***):** 07

CO-CURRICULAR, EXTENSION AND PROFESSIONAL DEVELOPMENT RELATED ACTIVITIES

1. Student related co-curricular/extension / field based activities (such as extension work through NSS/NCC / other channels/ cultural activities/subject related events/ advisement and counseling/ exhibition/ educational/ industrial tour, etc.):

1. State Student Coordinator, Region-II, (NE States), CSI, 2012-13.
2. Qualified CAT, 2005.

2. Contribution to Corporate life and management of the department and institution through participation in academic and administrative committees and responsibilities:

1. Nodal Officer for mapping of the AICTE approved institution with SAGY villages,w.e.f. 6th Feb, 2018.
2. Observer for WBJEE-2017.
3. Joint Nodal Officer for university e-Governence, 13.04.2017.
4. Member of Central Visiting Team (UCVT) for UG examination, NBU, 2017.
5. Chairman, Expert Committee in BCA, w.e.f. 07.06.2017.
6. Chairman, Expert Committee on Computer Application (COP), w.e.f. 26.02.2017.
7. Chairman, BoS in Under Graduate studies in Computer Science, w.e.f. 17.01.2017.
8. Member, Purchase Committee, NBU, 2017.
9. Member, Committee constituted for MPLAD scheme, NBU, 04.01.2017.
10. Member, Committee constituted for setting up of Virtual Classroom, NBU, 04.01.2017.
11. Member, Tender Committee, NBU, 2017.
12. Experts in Departmetal Committee for extension of fellowship at the Dept. of Physics,NBU, 2017.
13. Member of Refreshment Sub-Committee for 46th Annual Convocation of Univ. of North Bengal, 18th Feb, 2016.
14. Member of University Court as Head, Dept. of CSA, Univ. of North Bengal, 2016 .
15. VC Nominee, Member, Selection Committee for Secretarial Assistant of UGC SAP DRS III, Dept. of Philosophy, NBU, 26.12.2016.
16. University Nominee, Secection Committee, Appoinment of Lab Assistant, 09.11.2016
17. Subject Experts for Computer Proficiency Test of Group-C employees under compassionate ground, 02.11.2016
18. Member of ICT Committee (by NAAC monitoring committee, NBU),28.10.2016.
19. Member of LAN Wi-Fi Committee, NBU, 28.10.2016.
20. Member of High Power Technical Committee (for NAAC Cycle-3 preparation, NBU), 24.10.2016.
21. Member of Anti-Ragging Squad, 2016.
22. Observer for WBJEE-2015.
23. Member, BoS in BCA, Raiganj University, 2015.
24. Head, Department of Computer Science & Application (01.09.2014 to 31.08.2016).
25. Member, BoS in Computer Sc, University of Gourbanga, 2014.
26. Subject Experts in the selection committee for App. of Asstt. Professor in CS, North BengalSt.Xavier's College, 2013.
27. External Subject Experts in the selection committee for App. of Addl. Asstt. Teacher in Comp. Sc., Rajibpur St. Joseph High School, 2013.
28. Confidential Work for West Bengal Regional School Service Commission, 2013.
29. Former State Student Coordinator, Region-II, Computer Society of India (CSI),during 2012-13.
30. Member, BoS in Under Graduate studies in Computer Science,NBU w.e.f. 11.10.2012.

31. Member, Selection Board for selection of Project Staff, Dept. of History, NBU, 2012.
32. External Examiner for WBUT Practical Examination, 2012.
33. Former Secretary, Computer Society of India (CSI), Region-II, Siliguri Chapter.
34. Present Chairman, Computer Society of India (CSI), Region-II, Siliguri Chapter.
35. Member of Central Visiting Team (UCVT) for UG examination, NBU, 2011.
36. Head Examiner in COMS/COMA, HS Examination, 2011.
37. Observer, Term-End Examination (TEE) , Study Centre-2819, IGNOU,December 2011.
38. Observer, Term-End Examination (TEE) , Study Centre-2819, IGNOU, June 2011.
39. Observer, Term-End Examination (TEE) , Study Centre-2819, IGNOU,December 2010.
40. Observer, Term-End Examination (TEE) , Study Centre-2819, IGNOU, June 2010.
41. External Examinar, COP-Computer Application, Salesian College, Sonada, 2009.

3. Professional Development activities (such as participation in seminars, conferences, short term, training courses, talks, lectures, membership of associations, dissemination and general articles):

- **Participation in seminars, conferences, short term, training courses, talks, lectures**
  1. Participated in three day Seminar cum Workshop on Bioinformatics held on 12-14 Feb, 2009, Bioinformatics Faculty, N.B.U.
  2. Participated in 16th International Conference on High Performnce Computing (HiPC'09), Kochi, India, 16-19 December, 2009.
  3. Participated in one day user awarness programme on "Access to E0resources under N-LIST programme", organized by University Libray, NBU in collaboration with the INFLIBNET Centre, February 10, 2012.
  4. Participate in the Seminar cum workshop on Bioinformatics, Bioinformatics Faculty, N.B.U., 12-14 Feb, 2009.
  5. Bioinformatics at the Seminar cum workshop on Bioinformatics, Bioinformatics Faculty, N.B.U., 12-14 Feb, 2009
- **Membership of Associations**
  1. Life Member of Computer Society of India (CSI).
  2. Life Member of Indian Society for Technical Education (ISTE), 2010.
  3. Life Member of IAENG, 2011.
  4. Life Member of Internet Society.
  5. Member of ACM, June 2013.
  6. Associate Member (UACEE) of the IRED (Institute of Research Engineers ad Doctors) (August 21, 2014 - August 21, 2017)
  7. Member, CSTA (Computer Science Teachers Association)

Professional Experiences:

- Qualified CAT, 2005.
- Former Research Scholar, CSIR-IGIB, New Delhi.
- 10 years of PG Teaching.
- **Member of Reviewer Board:**
  - International Journal of Computers & Technology

RESEARCH AND (RELATED) ACADEMIC CONTRIBUTIONS

Research publications (Journals, Periodicals, Conference proceedings) and Editing Journals and Periodicals:

- 1. S. Sarkar, **A. Mandal** and K. Sarkar, An Automated Skull-Stripping Method by Windowing the Histogram, *International Journal of Computer Sciences and Engineering,* 5(3), 45-49, 2017.
  2. Sarkar K., Mandal R. K., **Mandal A.**, Sarkar S., Least Centre Distance Based MAXNET Architecture to Obtain Threshold for Brain Tumor Edema Segmentation From FLAIR MRI, *International Journal of Computer Sciences and Engineering,* 5(2), 112-120, 2017.
  3. Probal Dutta, Kanishka Sarkar, and **Ardhendu Mandal**, Segmentation of Breast Tumor from Mammographic Images Using Histogram Peak Slicing Threshold, *International Journal of Computer Sciences and Engineering,* 4(1) (Special Issue), 85-92, 2016.
  4. Kanishka Sarkar, **Ardhendu Mandal** and Rakesh Kumar Mandal, Histogram Peak Normalization Based Threshold to Detect Brain Tumor from T1 Weighted MRI, *International Journal of Computer Sciences and Engineering*, 4(1) (Special Issue), 16-24, 2016.
  5. Debasmita Saha, and **Ardhendu Mandal**, Design and performance evaluation of Advanced Priority Based Dynamic Round Robin Scheduling Algorithm (APBDRR), *International Journal of Computer Sciences and Engineering,* 4(1) (Special Issue), 78-84, 2016.
  6. **Ardhendu Mandal** and S. C. Pal, Identifying the Reasons for Software Project Failure and Some of their Proposed Remedial through BRIDGE Process Models, *International Journal of Computer Sciences and Engineering* , 3(1) (Special Issue), pp.118-126, 2015.
  7. Subhro Sarkar, **Ardhendu Mandal**, Comparison of Some Classical Edge Detection Techniques with their Suitability Analysis for Medical Images Processing, *International Journal of Computer Sciences and Engineering*, 3(1) (Special Issue), pp.81-87, 2015.
  8. Debasmita Saha, **Ardhendu Mandal** and S. C. Pal, User Interface Design Issues for Easy and Efficient Human Computer Interaction: An Explanatory Approach, *International Journal of Computer Sciences and Engineering (IJCSE)*, 3(1), pp.127-135, 2015.
  9. **Ardhendu Mandal** and S. C. Pal, A comparative analysis of BRIDGE and some other well known software development process models, *International Journal of Computer Science & Engineering Technology (IJCSET)*, 5(3), 196-202, 2014.
  10. **Ardhendu Mandal** and S. C. Pal, Achieving Agility through BRIDGE Process Model: An Approach to Combine the Agile and the Disciplined Software Development, *Innovations in Systems and Software Engineering, A NASA JOURNAL,*11(1), pp. 1-7, DOI:10.1007/s11334-014-0239-x, 2014 (Spriger).
  11. Jayanta Dutta **Ardhendu Mandal** and S. C. Pal, A Probabilistic Interval Division Method for Solving Nonlinear Equations, *International Journal of Advanced Research in Computer Science and Software Engineering (IJARCSSE)*, 3(8), 304-310, August 2013
  12. **Ardhendu Mandal** and S. C. Pal, Investigating and analyzing the desired characteristics of software development lifecycle (SDLC) models., *International Journal of Software Engineering Research & Practices(IJSERP)*, 2(4), pp. 9-15, 2012.
  13. **Mandal Ardhendu**, Dutta Jayanta and Pal S.C., A New Efficient Technique to Construct a Minimum Spanning Tree, *International Journal of Advanced Research in Computer Science and Software Engineering (IJARCSSE)*, 2(10), 93-97, October 2012.
  14. **Ardhendu Mandal**, S. C. Pal, Emergence of Component Based Software engineering, *International Journal of Advance Research in Computer science and Software Engineering (IJARCSSE)*, 2(3), pp. 311-315, 2012.
  15. Amit Ghosh Roy and **Ardhendu Mandal**, RDAT: A tool for DNA Analysis, *Salesian Journal of Humanities and Social Sciences: Technology and Society*, IV(1), pp. 55-61, May, 2013.

- **Full papers in conference (seminar/ workshop/ symposium) proceedings, etc:**

1. **Ardhendu Mandal** and Subhas Chandra Pal, An empirical study and analysis of the dynamic load balancing techniques used in parallel computing systems, Proc. of International conference ICCS-2010, Burdwan University, 313-318, Nov.19-20, 2010.
2. **Ardhendu Mandal**, BRIDGE: A model for Modern Software Development Process to cater the present Software Crisis, IEEE International Advance Computing Conference (IACC 2009), Patiala, India, 494-500, March 2009 [Available at IEEE Xplore DOI: 10.1109/IADCC.2009.4809259].
3. Kanishka Sarkar, **Ardhendu Mandal** and Rakesh Kumar Mandal, Brain Tumor Detection from T1 Weighted MRI Using Histogram Peak Difference Threshold, Proc. of National Conference on Research Trends in Computer Science and Application (NCRTCSA-2015) held on Nov. 07, 2015 at Siliguri Institute of Technology, Siliguri, 32-37, 2015.
4. Soumendra Nath Lahiri, Supratim Dawn, Rakesh Kumar Mandal, and **Ardhendu Mandal**, Steganography based on Image Border Manipulation Technique (IBMT), Proc. of the National Conference on Computational Technologies-2015 (NCCT'15), pp. 231-236, 2015.
5. **Ardhendu Mandal**, SRS BUILDER 1.0: An Upper Type CASE Tool for Requirement Specification, Proceedings of the 4th National Conference; INDIACom-2010, Computing for National Development, February 25-26, pp. 419-423, 2010, New Delhi.
6. Sarkar Tamal, Das Chandra Samir, **Mandal Ardhendu**, A Study of Computer-Based Simulations for Nano-Systems and their types. Proc. of NATCOM NAMTECH-2009, Lucknow University, India, 2009.
7. **Ardhndu Mandal**, Use of e-Resources in Education and Research, in the proceeding of UGC (ERO) Sponsored State Level Seminar on Promoting NMEICT-INFLIBNET e-Resources in North Bengal & Sikkim, 25th Feb, 2011.

- **Member of Board of Editors of Journals/Periodicals:**
  - Emperor International Journal of Finance and Management Research (EIJFMR) for the School of Computer Science, Engineering and Technology
  - International Journal of Computers & Technology (Reviewer)

RESEARCH PROJECT:

- **Sponsored Projects:**
  - **Carried Out**
    - Investigator of project titled "Design and Development of a Secure Stegosystem", funded by University of North Bengal (N.B.U.)(2014-15).
  - **Ongoing**
    - Principal Investigator of project titled "Design and Development of an Artificial Neural Network (ANN) Based Expert System to diagnose Human Brain Tumor from CT Scan and MRI Images", funded by UGC(Under Innovative Research Project Scheme, 2015-17)

TRAINING COURSES & CONFERENCE/SEMINAR/WORKSHOP PAPERS:

- **Organization or Participation in Refresher Courses/ Orientation Courses Methodology Workshops, Training, Teaching-Learning Evaluation Technology Programmes, Soft Skill Development Programme, Faculty Development Programmes, etc.**
  - **Not less than two weeks duration**
    1. Online Course "Object oriented analysis and design" [Online Verification], by NPTEL, MHRD, Govt. of India, (IIT KGP, 8 Week Course) Jul-Sep,2017.
    2. Online Course "Introduction to operating systems" [Online Verification] by NPTEL, MHRD, Govt. of India, (IIT M, 8 Week Course) Jul-Sep,2017.
    3. UGC Orientation Programme, UGC-HRDEC, NBU 07/04 - 04/05, 2010
    4. UGC Refresher Course on Computer Applications, Univ. of Kalyani, 8-28 January, 2008
  - **One week duration**
    1. STC on High Performance Computer Architecture, IIT Kharagpur, 11-16 July, 2009
    2. STC on Selected Topics in Software Engineering, IIT Khaagpur, 23-28 November, 2008
    3. STC on Embedded System Technology, IIT Kharagpur, 25-30 June, 2007
  - **Less than one week duration**
    1. Online Course "Computer Science 101", by Stanford Online, April 12, 2017.
    2. Online Course "Operating Systems - Understanding Hardware and Software Interrupts", Alison, 26 March 2017.
    3. STC on Bioinformatics in Genomics and Proteomics, IIT Khaagpur, 26-27 September, 2008

- **Presentation of research papers (oral/ poster) in conferences, Seminars, Workshops, etc.**
  - **International/Foreign Conference, etc.**
    1. Presented a paper entitled "An empirical study and analysis of the dynamic load balancing techniques used in parallel computing systems" in the International Conference on Computing and Systems -2010 (ICCS-2010), Burdwan University, Nov.19-20, 2010.
    2. Presented a paper entitled "BRIDGE: A model for Modern Software Development Process to cater the present Software Crisis" in the IEEE International Advance Computing Conference (IACC 2009), Patiala, India, March 2009.
  - **National**
    1. Presented a paper entitled "Higher Education and ICT: The Perspectives" in the One-Day National Seminar "Higher Education: Inclusive and Qualitative Growth Vis-a-Vis Officers", North Bengal University Officers Association (NBUOA), at NBU held on September 10, 2016.
    2. Presented a paper entitled "High Performance Computing" in One-Day National Seminar on Recent Trends In Computer Science, Raiganj University, 1st April, 2016.
    3. Presented a paper entitled "Identifying the Reasons for Software Project Failure and Some of their Proposed Remedial through BRIDGE Process Model" in the National Conference on Computational Technologies-2015 (NCCT'15), February 20, 2015.
    4. Presented a paper entitled "Comparison of Some Classical Edge Detection Techniques with their Suitability Analysis for Medical Images Processing" in the National Conference on Computational Technologies-2015 (NCCT'15), February 20, 2015.
    5. Presented a paper entitled "Steganography based on Image Border Manipulation Technique (IBMT)" in the National Conference on Computational Technologies-2015 (NCCT'15), February 20, 2015.
    6. Presented a paper entitled "User Interface Design Issues for Easy and Efficient Human Computer Interaction: An Explanatory Approach" in the National Conference on Computational Technologies-2015 (NCCT'15), February 20, 2015.
    7. Presented a paper entitled "GPGPU Computing: Utilizing the GPU of a Computer as General Computational Purpose" in the Workshop on Application of Information Technology in the Modern Civilization, St. Joseph's College, Darjeeling, 15th May, 2013.
    8. Presented a paper entitled "Drivers for Processor Evolution: From Singlecore Towards Multicore" in the Research Scholars' Workshop on Computer Science and Application (RSWCSA-2012), Salesian College-Siliguri Campus, Organised by CSI, Siliguri Chapter and Salesian College, Siliguri, September 11, 2012.
    9. Presented a paper entitled "An Approach for Image Based Steganography and Cryptography Technique" in the Research Scholars' Workshop on Computer Science and Application (RSWCSA-2012), Salesian College-Siliguri Campus, Organised by CSI, Siliguri Chapter and Salesian

         College, Siliguri, September 11, 2012.

10. Presented a paper entitled "Role of Fuzzy Logic in Computer" in the UGC-National Seminar on Advances in Mathematics-2012, Department of Mathematics, University of North Bengal, India, March 19-20,2012.
11. Presented a paper entitled "Fuzzy Logic and Its Industrial Application" in the NSAMGT-2012, Department of Mathematics, University of Kalyani, India, 21-22 March, 2012.
12. Presented a paper entitled "Prospects of Parallel Computing" in the IT Seminar, St. Joseph's College, Darjeeling, 24th September 2010.
13. Presented a paper entitled "SRS BUILDER 1.0: An Upper Type CASE Tool for Requirement Specification" in the 4th National Conference; INDIACom-2010, Computing for National Development, February 25-26, pp. 419-423, 2010, New Delhi.
14. Presented a paper entitled "Operating System as Process Manager" in the National Level Technical Paper Presentation Competition-2005, SVICS-Kadi, 8-9 January 2005.

- **Regional/State level**
  1. Presented a paper entitled "Use of e-Resources in Education and Research" in the UGC (ERO) Sponsored State Level Seminar on Promoting NMEICT-INFLIBNET e-Resources in North Bengal & Sikkim, 25th Feb, 2011.

- **Organisation of or Resource Persons or chairing the session(in Invited lectures /invited presentations/refreshers courses /training courses /study circles/ seminars /symposia/ conferences/ workshops/ academic courses, etc.)**
  1. Resource Person in two day workshop on "ICT in Education for Teachers" organized by the Dept. of Comp. Sc. and IQAC, Dhoopguri College during 31/03/17 - 01/04/17, 2017.
  2. Guest Faculty, Dept. of Library and Information Sc., NBU 2017.
  3. Program Secretary, NCCT'17 at the Dept.of Computer Sc. and Application, University of North Bengal, 2017.
  4. Resource Person for STC on Statistical Computing Techniques for quantitative and qualitative data at the HRDEC-NBU, 15/12/2016.
  5. Resource Person of MHRD approved TEQIP Phase-I sponsored five day Technical Workshop on "Applications of ANN in Modern VLSI - Embedded System Design & Parallel Computing" under FDP held on July 23-27, 2016 at Murshidabad College of Engineering and Technology, MAKAUT, WB, 2016.
  6. Organization Secretary, NCCT'16 at the Dept.of Computer Sc. and Application, University of North Bengal, 2016.
  7. Organization Secretary, NCCT'15 at the Dept.of Computer Sc. and Application, University of North Bengal, 2015.
  8. Invited Lecture on Parallel Computing for Bioinformatics, in the National Workshop on Bioinformatics, at Bioinformatics Facility, NBU, March 12-14, 2015.
  9. Invited Lecture (Two) on Web 2.0 at the Refresher Course in Library and Information Science at the HRDEC-NBU, 07/12/2015.
  10. Session-Chair at 22nd West Bengal State Science & Technology Congress-2015 (WBSSTC-2015), University of North Bengal, February 28-Marcch 01, 2015.
  11. Invited Lecture (Three) for M.Phil & Ph.D. coursework in the Dept. of Bengali, NBU, 2014.
  12. Guest Faculty, Dept. of Library and Information Sc., NBU 2012.
  13. Invited Lecture on C Programming at the Dept. of Mathematics, Univ. of North Bengal, Augest 15,2011.
  14. Invited Lecture on "Cyber Threats" at the *Half day Workshop on Cyber Security* held at the Department of Computer Science and Application, University of North Bengal, on 25th March, 2013.
  15. Organizing Secretary, Research Scholars' Workshop on Computer Science and Application (RSWCSA-2012), Salesian College-Siliguri Campus, Organised by CSI, Siliguri Chapter and Salesian College, Siliguri, September 11,2012.
  16. Resource Person in the "Open Source Software Movement" at Training Programme on Application of Open Source Software, USIC, Univ. of North Bengal, March 28-30, 2011,
  17. Resource Person in the "Workshop in Computing and Informatic, USIC, Univ. of North Bengal, March 15-18, 2010.

- **Recognition of Research:Prestigious Honours and Awards of national/international importance or recognized by the international agencies or the departments/ agencies of national/ state governments**
  - **International:**
    1. Significant Contribution Award (2013-2014), Computer Society of India (CSI).
  - **National:**
    1. Awarded UGC-JRF, June, 2005.