Dr. Mili Ghosh

Assisstant Professor
Department of Computer Science and Application
University of North Bengal
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Areas of Research Interest: Artificial Intelligence, Quantum Cellular Automata

Subject Specialization: Data Structure, Artificial Intelligence, Graph Theory, Web Technologies

Ph. D. Thesis Supervised: Completed: 0 Thesis Submitted: 0 Ongoing: 3

Educational Qualification:

Ph.D. (Computer Science)	Visva-Bharati University	Thesis title: "Some studies and Analysis of 2 Dot 1 Electron Quantum Dot Cellular Automata Circuits"
M. Sc.	Visva-Bharati University	Computer Science Masters Project: Design of an Intelligent Gas Detector using Neuro Swarm Technique
B. Sc. (Hons.) with Distinction	Visva-Bharati University	Computer Science

- Qualified the West Bengal SET 2017 examination in Computer Science and Applications

Scholarship/ Fellowship:

1. University Merit Scholarship for Bachelor's Degree (2007-2010).
2. West Bengal Govt. Merit-Cum-Means Scholarship for PG (Sciences) (2010-2012)
3. DST INSPIRE Fellowship (2014-2019)

Achievements:

1. University topper in Post-graduation
2. University Topper in Graduation

Experience:

1. Guest Teacher, Department of Computer & System Sciences, Siksha Bhavana, Visva Bharati University from Sep, 2019 to June, 2020
2. Project Linked Person (PLP), Project title: "Converting messaging text to English text suitable for sentiment analysis", Indian Statistical Institute Calcutta (ISI Calcutta), Kolkata, India from Nov 2012 to June 2013

Member of Professional Body:

1. Computer Society of India (CSI) – Kolkata Chapter Life Member
2. Association for Computing Machinery (ACM) Professional Membership

Member of Committee:

1. Member, BoS in M.Sc. Computer Science, University of North Bengal.
2. Member, BoS in MCA, University of North Bengal.
3. Member, DRC, Computer Science and Application, University of North Bengal.

Invited Talk:

Real-time Machine Leaning, two-day national webinar entitled "Application of Computational Statistics in Modern Era" Organized by: Department of Computer Centre, Vidyasagar University, West Bengal, India, 2nd – 3rd September 2021.

Publications:

Journal Publications

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *Influence of structure of 2 dimensional 2 dot 1 electron QCA cells in design of a pipelined subtractor*. Microsystem Technologies 03/2018;, DOI:10.1007/s00542-018-3826-1

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *Design of an arithmetic circuit using non-reversible adders in 2 dot 1 electron QCA*. Microsystem Technologies 08/2017;, DOI:10.1007/s00542-017-3526-2

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *A study on 2 dimensional 2 Dot 1 Electron quantum dot cellular automata based reversible 2:1 MUX design: An energy analytical approach*. International Journal of Computers and Applications 08/2016; 38(2-3):82-95., DOI:10.1080/1206212X.2016.1218239

Sunanda Mondal, Mili Ghosh, Kakali Datta, Debarka Mukhopadhyay, Paramartha Dutta: *A QCA design and energy analysis of binary semaphore with a comprehensive case study*. Innovations in Systems and Software Engineering 04/2019; DOI:10.1007/s11334-019-00338-2

Patents

S. Roy, P. Dutta, D. Mukhopadhyay and M. Ghosh, "Quantum Dot Cellular Automata based Food Irradiation System and Method of its working", Indian Patent No. 201631045060 dated 30/12/2016.

S. Roy, P. Dutta, D. Mukhopadhyay and M. Ghosh, "Quantum Dot Cellular Automata based Food Irradiation System and Method of its working", PCT Application No. PCT/IB2017/050660 dated 08/02/2017.

Conference Proceedings

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *A Study on Structural Benefits of Square Cells over Rectangular Cells in Case of 2Dot 1Electron QCA Cells*. International Conference on

Computational Intelligence, Communications, and Business Analytics; 09/2017, DOI:10.1007/978-981-10-6430-2_8

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *Design of an Efficient 2-Dot 1 Electron QCA based Non-reversible Adder,* pp. 106-112, ISBN: 978-93-80813-45-5 Microelectronics, Circuits and Systems (MICRO 2016); 07/2016

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *A 2D 2 Dot 1 electron Quantum Dot Cellular Automata based logically reversible 2:1 multiplexer*. 2015 IEEE International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN); 11/2015, DOI:10.1109/ICRCICN.2015.7434254

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *Design and analysis of two Dot one Electron QCA Ex-OR gate in logically reversible gate design*. 2015 International Symposium on Advanced Computing and Communication (ISACC); 09/2015, DOI:10.1109/ISACC.2015.7377354

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *A novel parallel memory design using 2 Dot 1 electron QCA*. 2nd International Conference on Recent Trends in Information Systems (ReTIS), 2015 IEEE; 07/2015, DOI:10.1109/ReTIS.2015.7232928

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *A 2 Dot 1 Electron Quantum Cellular Automata Based Parallel Memory*. Second International Conference on INformation Systems Design and Intelligent Applications - 2015(INDIA - 2015); 01/2015, DOI:10.1007/978-81-322-2250-7_63.

Sunanda Mondal, Mili Ghosh, Kakali Datta, Debarka Mukhopadhyay, Paramartha Dutta: *A Design and Application Case Study of Binary Semaphore Using 2 Dimensional 2 Dot 1 Electron Quantum Dot Cellular Automata: 52nd Annual Convention of the Computer Society of India, CSI 2017, Kolkata, India, January 19-21, 2018, Revised Selected Papers*. Social Transformation – Digital Way, 08/2018: pages 428-448; ISBN: 978-981-13-1342-4, DOI:10.1007/978-981-13-1343-1_36.

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *2-Dimensional 2-Dot 1-Electron Quantum Cellular Automata-Based Dynamic Memory Design*. Proceedings of the 4th International Conference on Frontiers in Intelligent Computing: Theory and Applications (FICTA) 2015, 01/2016: pages 357-365; ISBN: 978-81-322-2693-2, DOI:10.1007/978-81-322-2695-6_30

Mili Ghosh, Debarka Mukhopadhyay, Paramartha Dutta: *Energy efficient designing approach of flip-flops using 2-dot 1-electron QCA*. Proceedings of the second International Conference on Computational Intelligence, Communications, and Business Analytics (CICBA - 2018) during July 27-28, 2018 at Kalyani Government Engineering College, West Bengal, India. (In press).

Participation in other events:

Participated in one-day symposium on "Some New Research Directions in Machine Learning and Machine Intelligence" held at the Department of Computer & System Sciences, Visva Bharati, Santiniketan, West Bengal, India on **25/02/2017.**

Participated in 4th Regional Science and Technology Congress (Western region) 2019 in oral paper presentation organized jointly by The University of Burdwan and Department of Science & Technology and Biotechnology (DSTBT), Government of West Bengal at The University of Burdwan, Burdwan, West Bengal during **09/12/2019** to **10/12/2019.**

Participated in one-day international webinar on “Advances in Machine Learning” organized by the Department of Computer Science, in collaboration with IQAC, West Bengal State University, Barasat, West Bengal, India on **01/09/2020.**

Participated in one-day international webinar on “State of the art and future of Text Mining” hosted by the Department of Computer & System Sciences, Visva Bharati, Santiniketan, West Bengal, India on **02/11/2020.**

Participated in IEEE Computational Intelligence Society (CIS) Distinguished Lecture Program (DLP) by Prof. Sanaz Mostaghim, FIEEE, Ottovon-Guericke-Universitat Magdeburg, Germany on “Recent Advances in Swarm Intelligence and Robotics” Organizeed by the Department of Information Technology, RCC Institute of Information Technology, Kolkata, West Bengal, India on **06/11/2020.**

Participated in IEEE Computational Intelligence Society (CIS) Distinguished Lecture Program (DLP) by Prof. James C. Bezdek, University of Melbourne on “How big is too big? Clustering in (static) BIG DATA with Fantastic 4” Organizeed by the Department of Computer & System Sciences, Visva Bharati, Santiniketan, West Bengal, India on **22/11/2020.**

Additional Experiences:

Resource person in the TEQIP – II sponsored Workshop on “Research Methodology and LATEX” organized by and at the Department of Computer Science and Engineering of Narula Institute of Technology, Kolkata during **24/10/2016 to 28/10/2016.**

Resource Person in the TEQIP – II sponsored National Level Orientation and Faculty Development Programme on “LaTeX: The Art of Technical Writing” organized by and at the Department of Information Technology of RCC Institute of Information Technology, Kolkata held during **06/02/2017 to 10/02/2017.**

Resource person in the one day national webinar on “Technical Writing using LATEX” organized by the CSI-MICKVIE Student Chapter & CSE Dept., in association with Computer Society of India, Kolkata Chapter, MCKV Institute of Engineering, Kolkata on **26/06/2020.**

Organizing secretary in the three-day international webinar on “Emerging Trends in Computational Technologies” organized by Department of Computer Science and Application, University of North Bengal, in collaboration with Computer Society of India, Siliguri Chapter and IEEE CIS Kolkata Chapter, during **01/10/2021 to 03/10/2021**.

Place: Siliguri

Date: 02/03/2022

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