

BIO-DATA

PERSONAL REFERENCE:

Name : KAKALI DATTA

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Phone No. : +919434113468 (Mobile)

Date of Birth : 17th January, 1974

Present Designation : Assistant Professor-III

Institution Address : Department of Computer and System Sciences,
Siksha Bhavana, Visva-Bharati, Santiniketan,
District Birbhum, West Bengal, India, Pin-731235.

ACADEMIC QUALIFICATION:

<u>Examination</u>	<u>Year of Passing</u>	<u>Name of Institution</u>	<u>Name of the Board</u>
Ph. D. (Science)	2018	Siksha Bhavana	Visva-Bharati
GATE	1998		
M. E. (Computer Science and Technology)	2000	Bengal Engineering College, Sibpur	Bengal Engineering College (Deemed University)
B. Tech. (Computer Science and Engineering)	1998	University College of Science & Technology	University of Calcutta
B. Sc. (Statistics Honours)	1995	Presidency College, Kolkata	University of Calcutta
I.C.S.E. I.S.C.	1990 1992	Calcutta Girls' High School, Kolkata	Council for the Indian School Certificate Examinations, New Delhi

AWARDS RECEIVED:

- National Scholarship for B.Sc. (Honours).
- Silver Medal for standing First Class First in M.E. from Bengal Engineering College (Deemed University), Shibpur, Howrah.

EMPLOYMENT RECORD:

- Joined the Department of Computer and System Sciences, Siksha Bhavana, Visva-Bharati, Santiniketan, West Bengal, India as a Lecturer on 16th August, 1999.
- Continued as Senior Lecturer from 16th August, 2005.
- Continued as Assistant Professor-II from 1st January, 2006.
- Continued as Assistant Professor-III from 8th December, 2015 till date.

LIST OF ORIENTATION PROGRAMME / REFRESHER COURSE ATTENDED:

- ✓ July 22 – August 18, 2003: Four-week 42nd Orientation Programme held under the aegis of the UGC Academic Staff College, the University of Burdwan.
- ✓ December 24, 2004 – January 13, 2005: Three-week 1st Refresher Course in Computer Science held under the aegis of the UGC Academic Staff College, the University of Burdwan.
- ✓ January 31-February 20, 2007: Three-week 4th Refresher Course in Computer Science held under the aegis of the UGC Academic Staff College, the University of Burdwan.
- ✓ March 09-29, 2010: Three-week 1st Refresher Course in Information and Communication Technology [ICT(MD)] held under the aegis of the UGC Academic Staff College, the University of Burdwan.

LIST OF CONFERENCE / SEMINAR / WORKSHOP ATTENDED:

- ✓ January 10-21, 2000: Winter School on '*Local Area Network – Design, Implementation and Administration*' under Quality Improvement Programme sponsored by All India Council for Technical Education organized by Department of Computer Science & Technology, Bengal Engineering College (Deemed University), Howrah.
- ✓ December 26, 2000 – January 05, 2001: Winter School on '*Advanced Topics on Algorithm Design*' under Quality Improvement Programme sponsored by All India Council for Technical Education organized by Department of Computer Science & Technology, Bengal Engineering College (Deemed University), Howrah.
- ✓ March 24-27, 2009: A Short Term Course on '*Data Mining and Data Warehousing*' under Network Implementation Committee, sponsored by Technical Education Quality Improvement Programme conducted by the Department of Computer Science & Technology, Bengal Engineering and Science University, Shibpur, Howrah 711103.

- ✓ April 3-4, 2009: Two-day seminar on '*Engineering Application of Computational Intelligence*' at St. Thomas' College of Engineering and Technology, 4, Diamond Harbour Road, Kolkata – 700023.
- ✓ May 2-3, 2015: NCCCIP-2015, National Conference on Computing, Communication and Information Processing, NERIST, Nirjuli, Arunachal Pradesh, India
- ✓ November 16-18, 2015: FICTA-2015, 4th International Conference on Frontiers in Intelligent Computing: Theory and Applications, NIT Durgapur, West Bengal, India, West Bengal, India
- ✓ December 7-8, 2015: ICECCS, 4th International Conference on Eco-friendly Computing and Communication Systems, National Institute of Technology, Kurukshetra, India
- ✓ January 8-9, 2016: INDIA2016, 3rd International Conference on Information System Design and Intelligent Applications, Anil Neerukonda Institute of Technology & Sciences, Sangivalasa, Visakhapatnam, India
- ✓ February 18-19, 2016: ICIC²-2016, First International Conference on Intelligent Computing and Communication, Faculty of Engineering, Technology & Management, University of Kalyani, India
- ✓ July 9-10, 2016: Micro-2016, TEQIP II, WBUT Sponsored 3rd International Conference on 'Microelectronics, Circuits and Systems, Science City, Kolkata, India
- ✓ 24-25 March, 2017, CICBA-2017, First International Conference on Computational Intelligence, and Business Analytics, Calcutta Business School, India
- ✓ 20-24th November, 2018, National Workshop on “Understanding SPSS & its Application in Research”, at A.K. Dasgupta Centre for Planning and Development, Visva-Bharati Santiniketan, India.
- ✓ 26-28th March 2019, 3-Day Workshop on “Machine Learning and Data Analytics” at Jadavpur University, Kolkata, India.

LIST OF INVITED LECTURES:

- ✓ Invited for Lectures in the Technology Management Department, Bengal Institute of Technology & Management, Santiniketan for one semester.

LIST OF M. TECH. PROJECTS SUPERVISED:

- ✓ “*Opaque Biomedical Image Registration Using Deformation*” submitted to the Department of Computer Science and Engineering from University College of Science and Technology (Rajabazar Science College), University of Calcutta.

LIST OF PAPER PRESENTATIONS:

- ✓ ***“Design of n -to- 2^n Decoders using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata”*** at NCCCIP-2015, National Conference on Computing, Communication and Information Processing held during 2-3 May, 2015 at NERIST, Nirjuli, Arunachal Pradesh, India
- ✓ ***“Design of a Logically Reversible Half Adder using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata”*** at FICTA-2015, 4th International Conference on Frontiers in Intelligent Computing: Theory and Applications held during 16-18 November, 2015 at NIT Durgapur, West Bengal, India
- ✓ ***“Design of a Binary to BCD Converter using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata”*** at ICECCS, 4th International Conference on Eco-friendly Computing and Communication Systems held during 7-8 December, 2015 at National Institute of Technology, Kurukshetra, India
- ✓ ***“Design of a Ripple Carry Adder using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata”*** at INDIA2016, 3rd International Conference on Information System Design and Intelligent Applications) held during 8-9 January, 2016 at Anil Neerukonda Institute of Technology & Sciences, Sangivalasa, Visakhapatnam, India
- ✓ ***“Design of a BCD Adder using 2-Dimensional Two-Dot One-Electron Quantum Dot Cellular Automata”*** at ICIC²-2016, First International Conference on Intelligent Computing and Communication held during 18-19 March, 2016 Faculty of Engineering, Technology & Management, University of Kalyani, India
- ✓ ***“Design of Parity Generator and Checker using 2-Dimensional 2-Dot 1-Electron Quantum-dot Cellular Automata”*** at Micro-2016 TEQIP II, WBUT Sponsored 3rd International Conference on 'Microelectronics, Circuits and Systems held during 9-10 July, 2016 at Science City, Kolkata, India
- ✓ ***“Design of Two-bit Gray Code Counter using Two-dimensional Two-dot One-electron QCA”*** at CICBA-2017, First International Conference on Computational Intelligence, and Business Analytics held during 24-25 March, 2017 at Calcutta Business School, West Bengal, India.

LIST OF PUBLICATIONS:

• PUBLICATIONS IN PROCEEDINGS OF CONFERENCES:

- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design of n -to- 2^n Decoders using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata*” at National Conference on Computing, Communication and Information Processing (ICCCIP-2015) held during 2-3 May, 2015 at NERIST, Nirjuli, India, ISBN: 978-93-84935-27-6, pages 77-91, 2015.
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design of a 2-Dot 1-Electron QCA Full Adder using Logically Reversible Half Adders*” at International Symposium on Advanced Computing and Communication, (ISACC-2015) held during 14-15 September, 2015 at Assam University, Silchar, India, pages 281-287, 2015.
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design of a Logically Reversible Half Adder using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata*” at 4th International Conference on Frontiers in Intelligent Computing: Theory and Applications, (FICTA-2015) held during 16-18 November, 2015 at National Institute of Technology Durgapur, India, pages 379-389, 978-81-322-2695-6-32, 2015.
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design of a Binary to BCD Converter using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata*” at 4th International Conference on Eco-friendly Computing and Communication Systems (ICECCS-2015) held during 7-8 December, 2015 at National Institute of Technology, Kurukshetra, India, pages 153-159, 978-81-322-2753-3, 2015
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design of a Ripple Carry Adder using 2-Dimensional 2-Dot 1-Electron Quantum Dot Cellular Automata*” at 3rd International Conference on Information System Design and Intelligent Applications (INDIA-2016) held during 8-9 January, 2016 at Anil Neerukonda Institute of Technology & Sciences, Sangivalasa, Visakhapatnam, India, pages 263-270, 978-81-322-2755-5-27, 2016.
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design of a BCD Adder using 2-Dimensional Two-Dot One-Electron Quantum Dot Cellular Automata*” at First International Conference on Intelligent Computing and Communication (ICIC2-2016) held during 18-19 March, 2016 at Faculty of Engineering, Technology & Management University of Kalyani, India, pages 345-354, 20176
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Two-dot one-electron QCA design of parity generator and checker*”. Proceedings of 3rd International Conference on Microelectronics, Circuits and Systems (MICRO-2016) held during 9-10 July, 2016 at Science City, Kolkata, West Bengal, ISBN: 978-93-80813-45-5, pages 10-15, India.
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design of Two-bit Gray Code Counter using Two-dimensional Two-dot One-electron QCA*”. Proceedings of First International Conference on Computational Intelligence, and Business Analytics (CICBA-2017) held on 24-25 March, 2017 at Calcutta Business School, West Bengal, India, DOI

10.1007/978-981-10-6430-2, eBook ISBN 978-981-10-6430-2, Softcover ISBN 978-981-10-6429-6, Series ISSN 1865-0929, Edition Number 1, Springer Nature Singapore Pte Ltd., pp 75-84, 2017.

- ✓ S. Mondal, M. Ghosh, **K. Datta**, D. Mukhopadhyay and Paramartha Dutta. “A design and application case study of binary semaphore using 2 Dimensional 2 dot 1 electron Quantum Dot Cellular Automata” in the proceedings of 52nd Annual Convention of Computer Society of India (CSI 2017) will be held at Science City, Kolkata during 19th January to 21st January 2018. Annual Convention of the Computer Society of India, Springer, pp 428-448, 2018.
- ✓ P. K. Singh, B. Jana and **K. Datta** “Robust Watermarking Scheme for Compressed Image through DCT exploiting Superpixel and Arnold Transform”, in the Proceedings of the 6th International Conference on Mathematics and Computing (ICMC 2020) scheduled to be held during September 23-25, 2020 (in virtual mode) at the Sikkim University, Gangtok, Sikkim, India.

- **PUBLICATIONS IN JOURNALS:**

- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Design and Analysis of an Energy Efficient and Compact Two-dimensional Two-dot One-electron Quantum-dot Cellular Automata based Ripple Carry Adder*”. International Journal of Convergence Computing (IJCONVC), Vol. 2, No. 2, pages 161-182, 2016.
- ✓ **K.Datta**, D. Mukhopadhyay and P. Dutta, “*Comprehensive Study on the Performance Comparison of Logically Reversible and Irreversible Parity Generator and Checker Designs using Two-dimensional Two-dot One-electron QCA*”. Microsystem Technologies, Springer Berlin Heidelberg, pages 1-9, DOI: 10.1007/s00542-017-3445-2, Print ISSN 0946-7076, Online ISSN 1432-1858, 2017.
- ✓ **K. Datta**, D. Mukhopadhyay and P. Dutta. “*Comprehensive Design and Analysis of Gray Code Counters using 2-dimensional 2-dot 1-electron QCA*”. Microsystem Technologies, Springer Berlin Heidelberg, <https://doi.org/10.1007/s00542-018-3818-1>, Print ISSN0946-7076, Online ISSN1432-1858, pages 1-19, 2018.
- ✓ S. Mondal, M. Ghosh, **K. Datta**, D. Mukhopadhyay and P. Dutta. “A QCA design and energy analysis of binary semaphore with a comprehensive case study”. Innovations in Systems and Software Engineering, Sringer, <https://doi.org/10.1007/s11334-019-00338-2>, 2019.
- ✓ Singh, P.K., Jana, B., Datta, K., Superpixel based Robust Reversible Data Hiding Scheme Exploiting Arnold Transform with DCT and CA, Journal of King Saud University – Computer and Information Sciences (2020), doi: <https://doi.org/10.1016/j.jksuci.2020.09.014>

LIST OF PATENTS:

• **NATIONAL**

- ✓ Sudipta Roy, Paramartha Dutta, Debarka Mukhopadhyay and **Kakali Datta**, Title “Quantum Dot Cellular Automata based Radiation Knife for the Radiosurgery and Method of its working”, Indian Patent No. 201631045061 Dated 30/12/2016

• **INTERNATIONAL**

- ✓ Sudipta Roy, Paramartha Dutta, Debarka Mukhopadhyay and **Kakali Datta**, IN Title (EN) “Quantum Dot Cellular Automata Based Radiation Knife for Radiosurgery and Method of its Working” (FR) “Couteau De Rayonnement À Base D'automates Cellulaires À Points Quantiques Pour Radiochirurgie Et Son Procédé De Travail” Pub. No.: WO/2018/122624 International Application No.: PCT/IB2017/051596 Publication Date: 05.07.2018 International Filing Date: 20.03.2017 IPC: G06N 99/00 (2010.01), G21G 4/06 (2006.01), A61B 6/00 (2006.01)

WORKSHOP / SYMPOSIUM / WEBINAR CO-ORDINATED:

- ✓ Convener of a Five-Day Workshop on “*Application of Python in Big Data, Natural Language Processing (NLP), and Social Network Analysis (SNA)*” at the Department of Computer and System Sciences, Siksha Bhavana (Institute of Science), Visva-Bharati University during 12-16th February, 2020.
- ✓ General Chair of the Second Doctoral Symposium on Intelligence Enabled Research (DoSIER 2020) organized by the Department of Computer and System Sciences Visva-Bharati University during 12-13th August, 2020 [In Virtual Mode] technically sponsored by IEEE Computational Intelligence Society, Kolkata Chapter.
- ✓ Co-convener of the Webinar titled “State of the Art and Future of Text Mining” organized by Visva-Bharati University and technically sponsored by IEEE Computational Intelligence Society, Kolkata Chapter, on 2nd November, 2020

EDITED BOOK:

- ✓ “Intelligence Enabled Research DoSIER 2020”, Siddhartha Bhattacharyya, Paramartha Dutta and Kakali Datta, Springer Nature Singapore Pte Ltd. ISSN 2194-5357 ISSN 2194-5365 (electronic) Advances in Intelligent Systems and Computing ISBN 978-981-15-9289-8 ISBN 978-981-15-9290-8 (eBook) <https://doi.org/10.1007/978-981-15-9290-4>