

CURRICULUM VITAE

of

Professor Bhabani P. Sinha

PERSONAL DATA

Last Position: Professor (Higher Academic Grade), retired on April 30, 2017

Affiliation: Advanced Computing and Microelectronics Unit
Indian Statistical Institute, Calcutta, India

Date of Birth: April 4, 1952

Nationality: Indian

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EDUCATION

- Ph. D., University of Calcutta, 1979, Radiophysics and Electronics (Subject Area: *Computer Science*).
- M. Tech., University of Calcutta, 1975, Radiophysics and Electronics.
- B. Tech., University of Calcutta, 1973, Radiophysics and Electronics.
- B. Sc. (Honours in Physics), University of Calcutta, 1970.

PROFESSIONAL EXPERIENCE

1. **Department of Posts and Telegraph, Government of India** - *Assistant Divisional Engineer Telegraph* (08/1976 to 09/1976)
2. **Indian Statistical Institute, Calcutta :**
 - *Professor (Higher Academic Grade)* (07/2011 till date)
 - *Professor* (12/1987 to 06/2011)
 - *Associate Professor* (01/1982 to 11/1987)
 - *Computer Engineer* (10/1976 to 12/1981)
 - *Dean of Studies* (09/2010 to 09/2012)
 - *Head of the Advanced Computing and Microelectronics Unit* (01/1993 to 05/2001, 06/2004 to 09/2010)
 - *Professor-in-charge* of Computer and Communication Sciences Division (09/1998 to 08/2000)

3. **National Institute of Technology, Arunachal Pradesh, Distinguished Adjunct Professor** (04/2014 till date)
4. **Clemson University⁺, Clemson, USA, Department of Computer Science - Visiting Professor**, 08/2001 to 08/2002.
5. **Indian Institute of Technology⁺, Kharagpur - Indian Space Research Organization Chair Professor**, 07/2000 to 12/2000.
6. **University of Central Florida⁺, Orlando, USA - Visiting Professor**, School of Computer Science (09/1998 to 11/1998).
7. **Southern Illinois University⁺, Carbondale, USA - Visiting Associate Professor**, Department of Computer Science (05/1986 to 12/1987).
8. **Alexander von Humboldt Foundation fellow⁺ - Informatik Kolleg, GMD, Bonn** (02/1980 to 09/1981), **University of Saarbruecken, Saarland** (09/1990 to 01/1991), **University of Karlsruhe** (09/2003 to 12/2003).

⁺ *On academic leave from Indian Statistical Institute, Calcutta, India*

HONORS AND AWARDS

1. **Fellow of the IEEE, USA.**
2. **Fellow of the Indian National Academy of Engineering.**
3. **Fellow of the National Academy of Sciences, India.**
4. **Fellow of the Institution of Electronics and Telecommunication Engineers, India.**
5. **Fellow of the West Bengal Academy of Science and Technology.**
6. **M. K. Singal Memorial Award** of the **Indian Science Congress Association** in 2012 (*the award was handed over by the Hon'ble Prime Minister of India*) for significant and lifetime contributions to the development of Science and Technology.
7. **Ram Lal Wadha Medal** from the **Institution of Electronics and Telecommunication Engineering, India** in 2012 for *outstanding original contribution in the field of electronics and telecommunication engineering during the last ten years.*
8. **Eminent Engineer Award** from the **Institute of Engineers, India** in 2008.
9. **Award for Faculty Excellence** from **Clemson University, South Carolina, USA** in 2002.
10. **Homi J. Bhabha Award** of the **University Grants Commission, India**, in 1998, for outstanding contributions to Applied Sciences.
11. **Alexander von Humboldt Foundation Fellowship** of Germany during 1979-81, 1990-91 and 2003.

12. **S. K. Mitra Memorial Award** of the **Institution of Electronics and Telecommunication Engineers, India** in 1977 for the best research publication of the year in the Journal of IETE.
13. **Gold medals** from the **University of Calcutta** for securing **first position in order of merit** in the **B. Sc.** (1970) examination, **first position in order of merit** in the **B. Tech.** (1973) examination and **first position in order of merit** in the **M. Tech.** (1975) examination of Calcutta university.
14. **National Scholarship** on the basis of the results of the Higher Secondary Examination, 1967 of West Bengal.

PROFESSIONAL MEMBERSHIP

1. **Fellow of the IEEE, USA**
2. **Fellow of the Indian National Academy of Engineering**
3. **Fellow of the National Academy of Sciences, India**
4. **Fellow of the Institution of Electronics and Telecommunication Engineers, India**
5. **Fellow of the West Bengal Academy of Science and Technology**

COURSES TAUGHT (in India and Abroad)

Computer Organization, Computer Architecture, Data Structures, Design and Analysis of Algorithms, Operating Systems, Computer Networks, Data Base Management Systems, Software Engineering, Parallel Architectures and Algorithms, Mobile Computing.

RESEARCH INTERESTS

Published research papers in the following areas:

- | | |
|--|-----------------------------|
| 1. Microprogramming | 2. Computer Arithmetic |
| 3. Fault Diagnosis | 4. Graph Algorithms |
| 5. Parallel Architectures and Algorithms | 6. Interconnection Networks |
| 7. Wireless Networks & Mobile Computing | |

Recent research interests are in the areas of *Mobile Computing, Social Computing, Ad hoc and Sensor Networks, Cognitive Radio Networks, Low-Power Wireless Networks, and Algorithms.*

RESEARCH GUIDANCE

a) List of students who have been awarded Ph.D. degree:

1. Suranjan Ghose (1988), Jadavpur University, Calcutta
2. Krishnendu Mukhopadhyaya (1994), Indian Statistical Institute, Calcutta
3. Rajib K. Das (1995), Indian Statistical Institute, Calcutta
4. Srabani Mukhopadhyaya (1997), Indian Statistical Institute, Calcutta
5. Mallika De (1997), Jadavpur University, Calcutta
6. Debasish Das (1998), Indian Statistical Institute, Calcutta
7. Prasanta K. Jana (2000), Jadavpur University, Calcutta
8. Sasthi C. Ghosh (2004), Indian Statistical Institute, Calcutta
9. Amitava Sen (2010), Jadavpur University, Calcutta
10. Rabindranath Ghosh (2013), Jadavpur University, Calcutta
11. Goutam K. Audhya (2014), Jadavpur University, Calcutta
12. Ansuman Bhattacharya (2016), University of Calcutta

b) List of students who have registered for Ph.D. degree:

1. Pratham Majumder, University of Calcutta
2. Sayan Sen Sarma, University of Calcutta

SPONSORED RESEARCH (EXTERNALLY FUNDED)

1. *Design and Analysis of Cryptographic Algorithms*, DRDO funded project, Principal Investigator, 2012-2014.
2. *Compilation and Optimization of Reconfigurable Co-processors*, **Indo-French Center for the Promotion of Advanced Research** (IFCPAR), Co-investigator (in collaboration with IRISA, France), 1999-2002.

PROFESSIONAL ACTIVITIES

- **Subject Area Editor** (Algorithms) of the *Journal of Parallel and Distributed Computing* (Elsevier), 2008-2011.
- **Associate Editor** of the *IEEE Transactions on VLSI Systems*, 1998-2000.
- **General Co-Chair**, Ninth IEEE International Conference on Advanced Networks and Telecommunications (IEEE ANTS 2015).
- **General Co-chair**, Sixth International Conference on High - Performance Computing (HiPC'99).
- **General Co-chair**, Sixth International Workshop on Distributed Computing (IWDC 2004).
- **General Chair**, International Workshop on Mobile Computing, Tezpur, Assam, India, 2000.
- **Conference Chair**, International Conference on Radar, Communication and Computing (ICRCC 2012), Tiruvannamalai, India, Dec. 2012.

- **Program Co-Chair**, ITPC 2003, Kathmandu, Nepal.
- **Program Co-Chair**, ADCOM (International Conference on Advanced Computing and Communications) 2000 and ADCOM 2001.
- **Program Chair**, International Workshop on High Performance Computing, Indian Statistical Institute, India, 1998.
- **Vice chairman (Asia), Program committee**, High Performance Computing, 1997.
- **Program Chair**, NSTCS (National Seminar on Theoretical Computer Science), India, 1992.
- **Panel Co-Chair**, Eighth International Conference on Advanced Networks and Telecommunications (IEEE ANTS), 2014.
- **Member, Steering Committee**, Tenth International Conference on Advanced Networks and Telecommunications (IEEE ANTS), 2016.
- **Member, Steering Committee**, International Workshop on Distributed Computing (IWDC), 2000-2005.
- **Member, Steering Committee**, International Conference on Distributed Computing and Networking (ICDCN), 2006-2011.
- **Member, Program committees**, IWDC 2005, HiPC '02, I-SPAN '02, ADCOMP '98, ADCOMP '97, HiPC '96, VLSI Design '94, NSTCS '94, NSTCS '93.
- **Member, Organizing committee**, FSTTCS (Foundations of Software Technology and Theoretical Computer Science Conference), 1997.
- **Co-editor**, *Lecture Notes in Computer Science, Vol. 3326*, Springer-Verlag, Heidelberg, 2004.
- **Co-editor**, *Lecture Notes in Computer Science, Vol. 1745*, Springer-Verlag, Heidelberg, 1999.
- **Co-editor**, *Recent Trends in Computing and Communication*, (Proceedings of the 9th International Conference on Advanced Computing and Communications, December 16-19, 2001, Bhubaneswar, India), Tata McGraw-Hill, New Delhi, 2001.
- **Co-editor**, *Recent Advances in Computing and Communications*, (Proceedings of the 8th International Conference on Advanced Computing and Communications, December 14-16, 2000, Cochin, India), Tata McGraw-Hill, New Delhi, 2000.
- **Co-editor**, *Recent Trends in High Performance Computing*, Indian Statistical Institute, Calcutta, 1998.
- **Editor**, Proceedings, NSTCS National Seminar on Theoretical Computer Science, 1992.
- **Keynote Speaker**, International Workshop on Wireless Networks and Mobile Computing, Tezpur, Assam, India, August 2004.

- **Plenary Speaker**, International Conference on Advances in Engineering and Technology, Govt. College of Engineering and Ceramic Technology, Kolkata, April, 2016.
- **Referee**, IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on VLSI Systems, Parallel Computing, Journal of Parallel and Distributed Computing, Journal of Systems Architecture, Fibonacci Quarterly, Journal of IETE, India, Journal of Institution of Engineers, India, Indian Journal of Pure and Applied Mathematics, etc.
- **Referee**, IWDC ('04, '05), AMOC ('06), INDICON ('04), I-SPAN ('02), HiPC ('95, '96), ADCOM ('00, '01, 04), ADCOMP ('97, '98), VLSI Design, ('94, '95, '96, '97, 04), Asian Test Symposium, India ('95), ICPP ('92), International Conference on Parallel and Distributed Systems ('97), International Symposium on Parallel Processing, India, ('89), NSTCS ('91, '92, '93 and '94), etc.
- Nominated **Council Member** of the Institution of Electronics and Telecommunication Engineers, India (2010-11).
- Served as a **member**, *Sir J. C. Bose National Science Talent Search* awards committee, India
- Was invited as an **expert member** in the accreditation team of the State Technical Education Board, West Bengal, India.
- Was invited as an **expert member** in the academic and administrative audit team of Tezpur University, Assam (2011, 2014) and Dibrugarh University, Assam (2014).
- Served as the **Visitor's Nominee** for faculty selection at the National Institutes of Technology.
- Served as an **expert member** in the faculty selection committees of various Institutes and Universities including Indian Institute of Technology, Kharagpur, Indian Institute of Technology, Kanpur, Indian School of Mines, Dhanbad, University of Calcutta, Jadavpur University, Bengal Engineering and Science University, Shibpur, Howrah, Indian Institute of Engineering Science and Technology, Shibpur, Howrah, West Bengal University of Technology, National Institute of Technology, Durgapur, National Institute of Technology, Arunachal Pradesh, National Institute of Technology, Meghalaya, National Institute of Technology, Karaikal, National Institute of Technology, Sikkim, National Institute of Technology, Mizoram, National Institute of Technology, Manipur, IIIT, Bhubaneswar, Kalinga Institute of Industrial Technology University, Bhubaneswar, Kalyani University, Institute of Technology and Marine Engineering, Diamond Harbour, West Bengal, etc.
- Served as a **Member** of Board of Academy, Viswabharati University, India, Board of Studies in Information Technology, Kalyani University, India, Board of Studies of Rashtraguru Surendra Nath College, Barrackpore, India, Board of Studies of University Institute of Technology, Burdwan, India, Board of Studies, Narula Institute of Technology, Kolkata. Board of Studies, Indian School of Mines, Dhanbad.
- Serving as an **expert member** of the Research Advisory Committee, SRM University, Chennai.

ACADEMIC ADMINISTRATION

Served in various committees of the Indian Statistical Institute. Most notable of them are as follows:

- Served as the **Dean of Studies** (responsible for all students' affairs, examination process, faculty matters and students' admission system) during September 2010 – September 2012.
- Served as the **Professor-in-Charge** of the Computer and Communication Sciences Division during 1998-2000.
- Served as the **Head of Advanced Computing and Microelectronics Unit** from January 1993 to May 2001 and June 2004 to September 2010.
- **For the M.Tech. (Computer Science) programme of the Institute,**
 - i) served as a key person in introducing the M.Tech. (Computer Science) programme of the Institute (first batch in 1981-83) starting from the two-year Advanced PG Diploma programme,
 - ii) took part in revising the curriculum and syllabi of the M.Tech. (Computer Science) programme in three different phases (first as a member, then as the vice-chairman and finally as the chairman of the revision committees),
 - iii) served as the chairman of the Curriculum Implementation Committee for about 17 years.
- Served as a member of the **Ph.D./D.Sc. committee** of the Institute for five terms.
- Served as the **chairman/convener of the M.Tech. (Computer Science) admission committee** for many years, as the chairman/convener of the JRF (Computer Science) admission committee for many years, and as a member of several admission committees for a number of years including M.Tech. (Computer Science), JRF (Computer Science) and B.Stat. admission committees.
- Served as the **chairman of several committees for the selection of research fellows** for externally funded research projects in the Institute (including those funded by CSIR and DST).
- Served in numerous committees (in the capacity of chairman/convener/member) for recruitment of project-linked personnel in the Institute.
- Served as a **member of different faculty recruitment/promotion committees** over the years.
- Served as a **member of the Finance Committee** for two consecutive terms.
- Served as the **chairman of a committee** set up for assessing the number of employees needed for proper functioning of the Institute in categories C and D and then to submit a report to the ministry.
- Served as the **chairman of the Travel Grants Committee (TGC)** for almost a decade, and before that served as a member of the TGC for many years.
- Served as the **chairman of the Category Manual revision committee.**

- Served as the **chairman of various committees for recruitment at different categories including Office Assistants, Assistant Librarians, Drivers, etc.**
- Served as the chairman of a committee set up for investigating about some allegation of theft against an employee.
- Served as a **member** of i) **pay fixation committee** and ii) **a committee to look into anomalies of pay structure for different levels of employees.**
- Served as a **member of the Baranagar Works Advisory Committee (BWAC)** for several terms which was responsible for the planning of all types of civil and electrical works at the Kolkata premises of the Institute.

Complete List of Publications of Professor Bhabani Prasad Sinha

A. Books:

1. K. Sinha, S. C. Ghosh and B. P. Sinha, **Wireless Networks and Mobile Computing**. New York : **CRC Press**, 2016.
2. N. Das, A. Sen, S. K. Das and B. P. Sinha (Eds.), **Lecture Notes in Computer Science**, Vol. 3326, **Springer** 2004.
3. P. K. Sinha, B. P. Sinha and R.Gupta (Eds.), **Recent Advances in Computing and Communications**, **Tata McGraw-Hill**, 2000.
4. P. Banerjee, V. K. Prasanna and B. P. Sinha (Eds.), **Lecture Notes in Computer Science**, Vol.1745, **Springer** 1999.

B. Papers Published in Journals:

5. K. Mondal, P. S. Mandal and B. P. Sinha, "A robust deterministic approach node localization using NLOS signal", **International Journal of Communication Networks and Distributed Systems, (Inderscience)**, *in press*.
6. C. Sub-r-pa, G. Chakraborty and B. P. Sinha, "Route recommendation system to support multiple destinations and multiple routes to minimize road congestion", **International Journal of Communication Networks and Distributed Systems, (Inderscience)**, *in press*.
7. A. Bhattacharya, K. Sinha, D. Datta and B. P. Sinha, "MRBNS : a new energy-efficient communication scheme in low power wireless networks", **International Journal of Sensor Networks, (Inderscience)**, *in press*.
8. A. Bhattacharya, R. N. Ghosh, K. Sinha, D. Datta and B. P. Sinha, "Non-contiguous channel allocation for multimedia communication in cognitive radio networks", **IEEE Trans. on Cognitive Communications and Networking**, Vol. 1, No. 4, pp. 420-434, 2015.
9. A. Bhattacharya, R. Ghosh, K. Sinha, D. Datta, and B. P. Sinha, "Multimedia Channel Allocation in Cognitive Radio Networks using FDM-FDMA and OFDM-FDMA", **arXiv:1603.03938, 2016**.
10. A. Bhattacharya, P. Majumder, K. Sinha, B. P. Sinha and K. V. N. Kavitha, "An energy-efficient wireless communication scheme using Quint Fibonacci number system", **International Journal of Communication Networks and Distributed Systems, (Inderscience)**, Vol. 16, No. 2, pp. 140-161.
11. K. Mondal, P. S. Mandal and B. P. Sinha, "Analysis of multi-bound signals towards localization: A theoretical approach", **Wireless Personal Communications, (Springer)**, Vol. 83, No. 1, pp. 49-67, July 2015.
12. Rabindranath Ghosh, Koushik Sinha, Debasish Datta and Bhabani P. Sinha, "Energy-efficient communication in multihop wireless sensor networks using ternary encoding and silent symbols",

International Journal of Communication Networks and Distributed Systems, (Inderscience), Vol. 11, No. 4, pp. 376-389, 2013.

13. Anupam Chattopadhyay, Koushik Sinha, Subhamoy Maitra and Bhabani P. Sinha, " High-Performance Hardware Implementation for RC4 Stream Cipher", **IEEE Transactions on Computers**, Vol. 62, No. 4, pp. 730-743, 2013.
14. Goutam K. Audhya, Koushik Sinha, Kalikinkar Mandal, Rana Dattagupta, Sasthi C. Ghosh and Bhabani P. Sinha, " A New Approach to Fast Near-Optimal Channel Assignment in Cellular Mobile Networks", **IEEE Transactions on Mobile Computing** Vol. 12, No. 9, pp. 1814-1827, 2013.
15. K. Sinha and B. P. Sinha, "A Recurrence Relation Characterizing Run Distributions in the Context of Sensor Networks", **International Journal of Advanced Computer Engineering and Architecture**, Vol. 2, No. 2, pp. 321-330, 2012.
16. K. Sinha, B. P. Sinha and D. Datta, "An energy efficient communication scheme for wireless networks: a redundant radix-based approach," **IEEE Transactions on Wireless Communications**, Vol. 10, pp. 550 – 559, 2011.
17. G. K. Audhya, K. Sinha, S. C. Ghosh and B. P. Sinha, "A survey on the channel assignment problem in wireless networks", **Wireless Communication and Mobile Computing (John Wiley), (special issue on Wireless Mesh and Other Emerging Wireless Network Topologies)**, Vol. 11(5), pp. 583-609, May 2011.
18. K. Sinha, B. P. Sinha and D. Datta, "CNS: a new energy efficient transmission scheme for wireless sensor networks," **Wireless Networks Journal (ACM / Springer)**, vol. 16(8), pp. 2087–2104, 2010.
19. K. Sinha and B. P. Sinha, "On the distribution of runs of ones in binary strings", **Computers and Mathematics with Applications (Elsevier)**, Vol. 58, pp. 1816-1829, Nov. 2009.
20. G. K. Audhya and B. P. Sinha, "Multimedia channel assignment in cellular networks", Book chapter in **Algorithms, Architectures and Information Systems Security (Platinum Jubilee Series on Statistical Science and Interdisciplinary Research – Vol. 3)**. Singapore : World Scientific, 2009, pp. 161-194.
21. G. K. Das, S. Das, S. C. Nandy and B. P. Sinha, "Efficient algorithm for placing a given number of base stations to cover a convex region", **Journal of Parallel and Distributed Computing (Elsevier)**, Vol. 66, pp. 1353-1358, 2006.
22. P. K. Jana and B. P. Sinha, "An improved parallel prefix algorithm on OTIS-mesh", **Parallel Processing Letters (World Scientific)**, Vol. 16, No. 4, pp. 429-440, December 2006.
23. S. C. Ghosh, B. P. Sinha and N. Das, "Coalesced CAP : An improved technique for frequency assignment in cellular networks", **IEEE Transactions on Vehicular Technology**, Vol. 55, pp. 640-653, March 2006.
24. S. Mukhopadhyaya and B. P. Sinha, "Efficient algorithms for some common applications on GHCC", **Journal on Interconnection Networks (World Scientific)**, Vol. 6, No. 4, pp. 417-433, December 2005.
25. A. Laha, A. Sen and B. P. Sinha, "Parallel algorithms for identifying convex and non-convex basis polygons in an image", **Parallel Computing**, Vol. 31, pp. 290-310, 2005.

26. S. C. Ghosh, B. P. Sinha and N. Das, "Channel assignment using genetic algorithm based on geometric symmetry", **IEEE Transactions on Vehicular Technology**, Vol. 52, No. 4, pp. 860-875, July 2003.
27. S. C. Ghosh, B. P. Sinha and N. Das, "A new approach to efficient channel assignment for hexagonal cellular networks", **International J. Foundations of Computer Science, (World Scientific), (invited paper)**, Vol. 14, No. 3, pp. 439-463, June 2003.
28. P. K. Jana, B. D. Naidu, S. Kumar, M. Arora and B. P. Sinha, "Parallel prefix computation on extended Multi-Mesh network", **Information Processing Letters**, Vol. 84, No. 6, pp. 295-303, October 2002.
29. A. Sen, S. Bandyopadhyay and B. P. Sinha, "A new architecture and a new metric for lightwave networks", **IEEE Journal of Lightwave Technology**, Vol. 19, pp. 913-925, July 2001.
30. A. Sen, S. Bandyopadhyay and B. P. Sinha, "On new architectures for lightwave networks", **Computer Communications Journal (Special Issue on the Performance Evaluation of Telecommunication Systems : Models, Issues and Applications)**, (Elsevier), Vol. 24, No. 9, pp. 868-876, 2001.
31. B. P. Sinha and A. Mukherjee, "Parallel Sorting Algorithm using Multi-Way Merge and its Implementation on a Multi-Mesh Network", **Journal of Parallel and Distributed Computing, (Academic Press)**, Vol. 60, pp. 891-907, July 2000.
32. D. Das, M. De and B. P. Sinha, "A new network topology with multiple meshes", **IEEE Transactions on Computers**, Vol. 48, pp. 536-551, May 1999.
33. S. Sen Gupta and B. P. Sinha, "An $O(\log n)$ time algorithm for testing isomorphism of maximal outerplanar graphs", **Journal of Parallel and Distributed Computing (Academic Press)**, Vol. 56, pp. 144-156, 1999.
34. P. K. Jana and B. P. Sinha, "Fast parallel algorithms for Graeffe's root squaring technique", **Computers and Mathematics with Applications, (Pergamon-Elsevier)**, Vol. 35, No. 3, pp. 71-80, 1998.
35. M. De, D. Das, M. Ghosh and B. P. Sinha, "An efficient sorting algorithm on the Multi-Mesh network", **IEEE Transactions on Computers**, Vol. 46, pp. 1132-1137, October 1997.
36. P. K. Jana and B. P. Sinha, "Fast parallel algorithms for forecasting", **Computers and Mathematics with Applications, (Pergamon-Elsevier)**, Vol. 34, No. 9, pp. 39-49, 1997.
37. P. K. Jana and B. P. Sinha, "Fast parallel algorithms for Lagrange and Hermite Interpolations", **International Journal of Applied Science and Computations**, Vol. 4, pp. 118-136, October 1997.
38. M. De and B. P. Sinha, "Fast parallel multiplication using redundant quarternary number system", **Parallel Processing Letters, (World Scientific Publishing Co.)**, Vol. 7, No. 1, pp. 13-23, 1997.
39. S. Sen Gupta, R. K. Das, K. Mukhopadhyaya and B. P. Sinha, "A family of network topologies with multiple loops and logarithmic diameter", **Parallel Computing, (Elsevier)**, Vol. 22, pp. 2047-2064, 1997.
40. R. K. Das and B. P. Sinha, "A new topology with odd degree for multiprocessor systems", **Journal of Parallel and Distributed Computing, (Academic Press)**, Vol. 39, No. 1, pp. 87-94, November 1996.
41. K. Mukhopadhyaya and B. P. Sinha, "Fault-tolerant routing in distributed loop networks", **IEEE Transactions on Computers**, Vol. 44, pp. 1452-1456, December 1995.

42. R. K. Das and B. P. Sinha, "Optimal communication algorithms in distributed loop networks", **Journal of Parallel and Distributed Computing, (Academic Press)**, Vol. 30, pp. 85-90, 1995.
43. D. Das, K. Mukhopadhyaya and B. P. Sinha, "Implementation of four common functions on an LNS co-processor", **IEEE Transactions on Computers**, Vol. 44, pp. 155-161, January 1995.
44. P. K. Jana and B. P. Sinha, "Fast parallel algorithm for polynomial interpolation", **Computers and Mathematics with Applications, (Pergamon-Elsevier)**, Vol. 29, No. 4, pp. 85-92, 1995.
45. R. K. Das, K. Mukhopadhyaya and B. P. Sinha, "A new family of bridged and twisted hypercubes", **IEEE Transactions on Computers**, Vol. 43, pp. 1240-1247, October 1994.
46. M. De and B. P. Sinha, "Fast parallel algorithm for ternary multiplication using multivalued I^2L technology", **IEEE Transactions on Computers**, Vol. 43, pp. 603-607, May 1994.
47. S. Sen Gupta, K. Mukhopadhyaya, B. P. Sinha and B. B. Bhattacharya, "Geometric classification of triangulations and their enumeration in a convex polygon", **Computers and Mathematics with Applications, (Pergamon-Elsevier)**, Vol. 27, No. 7, pp. 99-115, 1994.
48. S. Ghose, B. P. Sinha and J. Dattagupta, "An extensible fault-tolerant network architecture", **Computers & Electrical Engineering, (Pergamon Press)**, Vol. 19, No. 5, pp. 365-376, 1993.
49. R. Fleischer, B. P. Sinha and C. Uhrig, "A lower bound for the worst-case of Bottom-Up Heapsort", **Information and Computation (Academic Press)**, Vol. 102, No. 2, pp. 263-279, February 1993.
50. K. Mukhopadhyaya and B. P. Sinha, "Reliability analysis of networks using stochastic model", **Information Sciences (Elsevier)**, Vol. 65, No. 3, pp. 225-237, November 1992.
51. K. Mukhopadhyaya and B. P. Sinha, "Hamiltonian graphs with minimum number of edges for fault-tolerant topologies", **Information Processing Letters, (North Holland)**, Vol. 44, pp. 95-99, November 1992.
52. P. K. Srimani, B. P. Sinha, B. B. Bhattacharya and S. Ghose, "Properties of a class of trivalent network graphs and optimal routing", **Computers and Mathematics with Applications, (Pergamon Press)**, Vol. 22, No. 2, pp. 39-47, 1991.
53. B. P. Sinha and P. K. Srimani, "Fast parallel algorithms for binary multiplication and their implementation on systolic arrays", **IEEE Transactions on Computers**, Vol. C-38, pp. 424-431, March 1989.
54. B. P. Sinha, B. B. Bhattacharya, S. Ghose and P. K. Srimani, "A parallel algorithm to compute the shortest paths and diameter of a graph and its VLSI implementation", **IEEE Transactions on Computers**, Vol. C-35, pp. 1000-1004, November 1986.
55. B. P. Sinha, S. Ghose, B. B. Bhattacharya and P. K. Srimani, "A further note on Pascal graphs", **Fibonacci Quarterly**, pp. 251-257, August 1986.
56. B. P. Sinha, J. Dattagupta and A. Sen, "Improvement in the speed of FFT processors using segmented memory and parallel arithmetic units", **Signal Processing, (North Holland)**, Vol. 8, No. 2, pp. 267-274, April 1985.

57. B. P. Sinha and B. B. Bhattacharya, "On the numerical complexity of short-circuit faults in logic networks", **IEEE Transactions on Computers**, Vol. C - 34, pp. 186-190, February 1985.
58. B. P. Sinha and P. K. Srimani, "A new approach to program verification", **Computers and Electrical Engg.**, (Pergamon Press), Vol. 11, pp. 159-171, 1984.
59. P. K. Srimani and B. P. Sinha, "A simple way to near minimization of microprogram control memory", **International Journal of Computer and Information Sciences**, (Plenum Publishing), Vol. 12, No. 1, pp. 47-64, 1983.
60. B. P. Sinha and P. K. Srimani, "Some studies on the characteristic polynomial of a graph", (*invited paper*), **International Journal of Electronics**, (Taylor & Francis), Vol. 54, No. 3, pp. 377-400, 1983.
61. P. K. Srimani and B. P. Sinha, "Impossible pair constrained test path generation in a program", **Information Sciences**, (Elsevier), Vol. 28, pp. 87-103, 1982.
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