

# C. PANDU RANGAN

## CURRICULUM VITAE

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### PERSONAL DATA

Born : 20/09/1955, Madras, India.  
Married, Two Children,  
Citizen of India.  
Passport Number : Z1760012, Valid till 02 – 06 – 2019.  
Father's Name : S.R.CHANDRASEKARAN.

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### OFFICE ADDRESS

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### EDUCATIONAL BACKGROUND

M.Sc.	1977	University of Madras	Mathematics
Ph.D.	1984	Indian Institute of Science, Bangalore, India.	Applied Mathematics (Computer Science)

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### AWARDS AND HONOURS

1. Fellow, Indian National Academy of Engineering, (2006).
2. Member, Board of Directors, International Association for Cryptologic Research, (IACR), (2002 – 2005).

3. Member, Board of Directors, Society for Electronic Transaction and Security (SETS), (2005 – 2007).
4. Member, Editorial Board, Lecture Notes in Computer Science Series (LNCS Series), Springer-Verlag, Germany, (2005 – 2011).
5. Member, Editorial Board, Journal of Parallel and Distributed Computing, (2005 – 2007).

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## EMPLOYMENT HISTORY

Lecturer	:	Dept. of Computer Science and Engineering, IIT, Madras, India 600 036	June 1982 - July 1987
Asst. Prof.	:	-DO-	July 1987 - Jan. 1991
Asso. Prof.	:	-DO-	Jan. 1991 - May 1995
Professor	:	-DO-	May 1995 - <b>Present</b>
Head	:	-DO-	Oct. 1998 - Aug. 2001
Visiting Professor	:	Information Communication University, Korea	Jan. 2003 - Jan. 2004
Head	:	Dept. of Computer Science and Engineering, IIT, Hyderabad, India	Aug 2008 - <b>Mar 2011</b>
Head	:	Indian Statistical Institute, Chennai, India	Apr 2011 - <b>Apr 2012</b>

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## AREAS OF INTEREST

Cryptography  
Data Structures and Algorithms  
Graph Algorithms  
Computational Geometry  
Parallel Algorithms  
Randomized Algorithms  
Distributed Algorithms  
VLSI  
Discrete Mathematics  
Theory of Computation  
Computational Biology  
Theoretical Computer Science  
Technology Enhanced Learning.

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## COURSES TAUGHT

(Under Graduate, Post Graduate and Research level)

Introduction to High Performance Computing  
Parallel and Randomized Algorithms  
Parallel and VLSI Algorithms  
Design and Analysis of Algorithms  
Programming and Data Structures  
Graph Theory and Combinatorics  
Mathematical Foundations of Computer Science  
Automata, Languages and Computation  
Programming and Numerical Methods  
Recent Trends in Theoretical Computer Science  
Fundamentals of Computing  
Introduction to Computing  
Theory and Practice of Technology Enhanced Learning  
Data Structures and Algorithms  
Advanced Data Structures and Algorithms  
Foundations of Cryptography  
Cryptography & Network Security

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## SPONSORED PROJECTS

1. TITLE : Investigations Into Scientific Supercomputing.  
SPONSOR : ISRO.  
DURATION : 2 Years, (1986-1988).  
STATUS : Completed.  
MY ROLE : Chief Investigator.
  
2. TITLE : Cellular Automata and its Applications.  
SPONSOR : DST(Dept. of Science and Technology).  
DURATION : 3 Years, (1987-1990).  
STATUS : Completed.  
MY ROLE : Co-Investigator.  
OTHER INVESTIGATORS : Dr.Kamala Krithivasan.  
(Chief Investigator).

3. TITLE : CAD for VLSI Design.  
 SPONSOR : DOE (Department of Electronics).  
 DURATION : 5 Years, (1986-1991).  
 STATUS : Completed.  
 MY ROLE : Co-Investigator.  
 OTHER INVESTIGATORS : Prof.H.N.Mahabala.  
 (Chief Investigator).
  
4. TITLE : Studies in Parallel and Distributed  
 Search Algorithms.  
 SPONSOR : Department of Atomic Energy.  
 DURATION : 3 Years, (1991-1994).  
 MY ROLE : Chief Investigator.
  
5. TITLE : Studies in Computational Geometry  
 and its applications.  
 SPONSOR : MHRD and KFA (INDO-GERMAN PROJECT).  
 DURATION : 3 years, (1993-1996).  
 MY ROLE : Co-Investigator.  
 OTHER INVESTIGATORS : Prof.Kamala Krithivasan.
  
6. TITLE : Computational Geometry and its  
 Applications to Robotics.  
 SPONSOR : Department of Science and Technology (DST).  
 DURATION : 3 Years, (1994-1997).  
 MY ROLE : Co-Investigator.  
 OTHER INVESTIGATORS : Prof. Kamala Krithivasan.
  
7. TITLE : Information Sciences.  
 SPONSOR : MHRD.  
 MY ROLE : Chief Investigator (From 1992).  
 OTHER INVESTIGATORS : Prof. Kamala Krithivasan.
  
8. TITLE : AI Techniques For Industrial Applications.  
 SPONSOR : MHRD  
 MY ROLE : Chief Investigator (From 1992).  
 STATUS : Completed in 1995.

9. TITLE : A Computer Based Learning System for Foundation Courses in Computer Science.  
 SPONSOR : AICTE.  
 MY ROLE : Chief Investigator.  
 STATUS : Completed in 1999.
10. TITLE : Adaptive Error Correcting Codes for Multimedia over ATM.  
 SPONSOR : DST (Indo-Israel Project).  
 MY ROLE : Chief Investigator.  
 OTHER INVESTIGATORS : Prof. Kamala Krithivasan.  
 : Prof.S.V. Raghavan.  
 STATUS : Completed (1999-2002).
11. TITLE : Trends in Data Processing.  
 SPONSOR : TCS.  
 MY ROLE : Chief Investigator.  
 STATUS : Completed in 2001.
12. TITLE : Web Based Learning - I.  
 SPONSOR : CBSI, India.  
 MY ROLE : Chief Investigator.  
 STATUS : Completed 1999 - 2002.
13. TITLE : Foundation Research in Cryptography.  
 SPONSOR : Microsoft Research Labs India Pvt. Ltd.  
 MY ROLE : Principal Investigator.  
 STATUS : (2006-2007).
14. TITLE : Establishment of Nationwide Quality of Service Network Test bed.  
 SPONSOR : Ministry of Communications and Information Technology.  
 MY ROLE : Co-Investigator.  
 OTHER INVESTIGATORS : Prof. S.V. Raghavan. (Chief Investigator)  
 : Prof. S. Raman.  
 : Prof. Kamala Krithivasan.  
 STATUS : (2005-2008).
15. TITLE : Investigations for Thin Multi Precision Arithmetic.  
 SPONSOR : DRDO.  
 MY ROLE : Chief Investigator.  
 STATUS : (2005-2006).

16. TITLE : Protocols for Secure Communication and Computation.  
SPONSOR : Department of Information Technology.  
MY ROLE : Chief Investigator.  
STATUS : (2006-2009).
  
17. TITLE : Foundation Research in Cryptography.  
SPONSOR : Microsoft Research, India.  
MY ROLE : Chief Investigator.  
STATUS : (2006-2009).
  
18. TITLE : Protecting Critical Infrastructure from Denial of  
Service Attacks: Tools, Technology, and Policy  
(Indo-Australian Joint Project).  
SPONSOR : Governments of India and Australia.  
MY ROLE : Co-Investigator.  
STATUS : (2008-2010).
  
19. TITLE : Information Network for Natural Disaster  
Mitigation and Recovery - INNDMR  
(Indo-Japan Joint Project at IIT Hyderabad 2010-2015).  
SPONSOR : Governments of India and Japan.  
MY ROLE : Co-Investigator.

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## CONTINUING EDUCATION PROGRAMS

1. Co-ordinator for a course on MICRO PROCESSORS for engineering college teachers (1985).
2. Complete Courses were offered on COMPUTABILITY THEORY and on DESIGN AND ANALYSIS OF ALGORITHMS during DEC 1985 and MAY 1986 at IIT DELHI for teachers under CS MANPOWER DEVELOPMENT PROGRAM sponsored by MHRD (Ministry of Human Resources and Development).
3. Delivered a series of lectures in Design and Analysis of Algorithms during JAN to MAY 2006 at Indian Institute of Information Technology and Management, Kerala.



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## MAJOR PROFESSIONAL ACTIVITIES

### A. PROFESSIONAL VISITS ABROAD

1. Visited Suprinum, Bonn, W.Germany for about a month (1988) on an invitation for some studies on supercomputing and super computers.
2. Visited Siemens R & D center at MUNICH, West Germany for technical and project discussions for about one month during September - October, 1989.
3. Visited Lab for Theoretical Computer Science (LITP) in University of Paris during May - July 1990 on an Invitation for joint Research Studies on parallel algorithmics.
4. Visiting Professor, Department of Computational Sciences, University of Saskatchewan, CANADA, June - July, 1991.
5. Visiting Professor, Department of Applied Mathematics, National Chio Tung University, Hsinchu, Taiwan, ROC, December, 1991.
6. Visited Max Plank Institute for Informatics, Saarbruken, as a co-investigator in the INDO-GERMAN Joint Project on Computational geometry during June - September, 1993.
7. Visited Beijing, China, to present two papers in the International Conference, ISAAC'94, August, 1994.
8. Visited Florida International University, USA for discussions on joint Indo - US proposals, June, 1995.
9. Visited University of Paris for discussions, July, 1995.
10. Visiting Professor, Department of Computer Science, Chinese University of Hong Kong, June - July, 1996.
11. Visiting Scientist, Max-Plank Institute for Informatics, Saarbruken, Germany, December, 1996.
12. Visiting Faculty, University of New Castle, New Castle, Australia, May - June, 1997.
13. Visiting Faculty, Florida International University, Miami, USA, July - August 1997.
14. Visiting Professor, Korea Advanced Institute of Science and Technology, Korea, August - December, 1997.
15. Visiting Scientist, Tokyo IBM Research Lab, Tokyo, Japan, June - July, 1998.
16. Visited Hong Kong & Seoul, Korea to present papers in International Conferences, December, 1998.

17. Visiting Faculty, EPFL, Lausanne, Switzerland, June - July, 1999.
18. Visited National University, Singapore for discussion on MIT-Singapore alliance, January, 2000.
19. Visited IBM, Tokyo Research Laboratory to deliver a series of Lecture on Randomized Algorithms, June - July, 2000.
20. Visited Microsoft Research Foundations, Microsoft, Redmond, USA to participate in faculty summit, June - July, 2001.
21. Visited IBM, Tokyo Research Laboratory to deliver a series of Lecture on Algorithms, June - July, 2002.
22. Visited Melbourne, Australia to present a paper in International Conference on Information Security, July 5-7, 2002.
23. Visited San Francisco, USA to present a paper in International Conference on Distributed Computing, ACM PODC 2002, July 21-24, 2002.
24. Visited Singapore, to present a paper in International Conference on Computing and Combinatorics, COCOON 2002, August 15-17, 2002.
25. Visited Queenstown, New Zealand to present a paper in International Conference on Advances in Cryptology, ASIACRYPT 2002, December 1-5, 2002.
26. Visiting Professor, Information Communication University, Korea, January 2003-January 2004.
27. Visited ETZ-Zurich, Switzerland for Technical Discussions / Seminar series, January - February 2005.
28. Visited Lucent Technologies, USA and DIMACS, New Jersey for discussions and seminar series, May - June 2005.
29. Visited Microsoft Research, Redmond, USA to participate in Faculty summit - July 2005.
30. Visited Lucent Technology, USA and presented paper in TCC 2006.

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## B. WORKSHOPS AND CONFERENCES

1. Served in Program Committee and Chaired a session in First International Workshop on VLSI design, INDIA, (1986).
2. Organized a workshop on PARALLEL PROCESSING AND SUPERCOMPUTING AT IIT MADRAS (1987) (Faculty Members who offered the lecture include:
  - (a) Prof Ullrich Trottenberg,  
Director, SUPRINUM, Bonn, W.Germany.
  - (b) Dr.Hilles, Founder Director,  
Thinking Machines Inc, U.S.A.)  
(SPONSORED BY ISRO - IIT JOINT RESEARCH CELL)
3. Member, Program Committee, National Seminar on Theoretical Computer Science, Madras, India, July, 1991.
4. Member, Program Committee, The Fifth International Conference On VLSI Design, VLSI DESIGN '92, Bangalore, INDIA, January, 1992.
5. Member, Program Committee, 12<sup>th</sup> FSTTCS, New Delhi, INDIA, 1992.
6. Chair, Session on Approximate Algorithms, 14<sup>th</sup> FSTTCS, Madras, INDIA, 1994.
7. Member, Program Committee, International Conference on High Performance Computing, New Delhi, December, 1995.
8. Member, Program Committee, 15<sup>th</sup> FSTTCS, Bangalore, December, 1995.
9. Member, Program Committee, International Conference on Discrete Mathematics and Number Theory, Trichy, India, January, 1996.
10. Member, Program Committee, International Conference on High Performance Computing, Trivandrum, December, 1996.
11. Member, Program Committee, 17<sup>th</sup> FSTTCS, Kharagpur, December, 1997.
12. Member, Program Committee, ISAAC '97, Singapore, December, 1997.
13. Member, Program Committee, 18<sup>th</sup> FSTTCS, Madras, India, December, 1998.
14. Member, Program Committee, and Session Chair, ISAAC '98, South Korea, December, 1998.
15. Symposium Chair, ISAAC '99, Madras, India, December, 1999.
16. Symposium Chair, 19<sup>th</sup> FSTTCS, Madras, India, December, 1999.

17. Member, Program Committee, INDOCRYPT 2000, Calcutta, India.
18. Program Co-chair, INDOCRYPT 2001, Madras, India, December, 2001.
19. Member, Program Committee, COCOON, Singapore, August, 2002.
20. Member, Program Committee, 8<sup>th</sup> ACISP, Australia, July, 2003.
21. Member, Program Committee, 10<sup>th</sup> ACISP, Australia, July, 2005.
22. Member, Program Committee, Mycrypt 05, Malaysia, September, 2005.
23. General Chair, ASIACRYPT 2005.
24. Member, Program Committee, INDOCRYPT 2006.
25. Member, Program Committee, VietCrypt 2006.
26. Member, Program Committee, WISA 2006.
27. Member, Program Committee, ICDCN 2006.
28. Member, Program Committee, CANS 2006.
29. Member, Program Committee, PKC 2007.
30. Program Co-Chair, INDOCRYPT 2007.
31. Member, Program Committee, ISAAC 2007.
32. Member, Program Committee, CANS 2007.
33. Member, Program Committee, INDOCRYPT 2008.
34. Member, Program Committee, CANS 2008.
35. Member, Program Committee, ASIACRYPT 2008.
36. Member, Program Committee, WISA 2008.

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### C. PUBLICATION SERVICES

1. Member, Editorial Board, Mathematics Teacher (1987-1988).
2. Member, Editorial Board, CSI Journal From May 1990.
3. Guest Editor, Special Issue on Algorithmics for the CSI Journal of Computers and Informatics - 1992.
4. Foundation Editor, Journal of Universal Computer Science (JUCS) An International Electronic Journal published by Springer Verlag, Germany, 1994.
5. Refereed/ Refereeing Papers for several reputed International journals such as Information Processing Letters, JI of Algorithms, SIAM JI of Disc Maths, Nordic Journal of computing, Computational Geometry Theory and Practice, Algorithmica, Acta informatica, Journal of Parallel and Distributed Computing
6. Refereed/ Refereeing papers for several reputed international conferences such as International Conference on Parallel Processing (ICPP), International Parallel Processing Symposium (IPPS), FSTTCS, HiPC, ISSAC, INDOCRYPT, etc.

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#### D. MISCELLANEOUS

1. Organized State Level Mathematical Olympiad (1987) for AMTI.
2. Member in the board of academic courses for several Universities.
3. Member, Working Group for forming C-DAC, (CENTER FOR DEVELOPMENT OF ADVANCED COMPUTING), A Nation Level Initiative on Supercomputers and Supercomputing, (1986-1988).
4. Invited to serve as a specialist referee by Hong Kong Research Grants Council, Hong Kong, for refereeing applications for research project grants, (1995).
5. Delivered the KEY NOTE ADDRESS in National Seminar on Graph Theory conducted at Annamalai University, Chidambaram, Tamil Nadu, India, on February 21, 1990.
6. Presented a talk on DESKTOP PUBLISHING in ALL INDIA RADIO, MADRAS on 14/10/1992 in a popular science program.
7. Presented a talk on ARTIFICIAL INTELLIGENCE in ALL INDIA RADIO, MADRAS on 13/2/1993 in a popular science program.
8. Participated in a Discussion on Computers in Education in ALL INDIA RADIO, MADRAS on 5/5/1994.
9. Presented a talk on VIRTUAL REALITY in ALL INDIA RADIO, MADRAS on 28/3/1995 in a popular science program.
10. Presented a planary talk on APPLICATION SPECIFIC PARADIGMS in THE SIXTH NATIONAL SEMINAR ON THEORETICAL COMPUTER SCIENCE, Rajasthan, 1996.
11. Presented a talk on TRENDS IN ALGORITHMICS at ANNA UNIVERSITY, October, 1996.
12. Vice-President, IARCS, 1999 – 2002.
13. Member, Society of the Tamil Nadu Science and Technology Centre, 2001 – 2003.
14. Vice-President, Cryptology Research Society India (CRSI), 2001 – 2004, 2005 – 2007.
15. Member, Board of Directors, International Association of Cryptology Research (IACR), 2003 – 2005.
16. Member, Board of Directors, Society for Electronic Transactions and Security (SETS), 2005 – 2007.
17. FELLOW, Indian National Academy of Engineering, (FNAE).

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## MAJOR DEPARTMENTAL/INSTITUTE RESPONSIBILITIES

1. Set up the Theoretical Computer Science lab (TCS LAB) in 1990. The infrastructure was built from the departmental grants and from the project grants. In charge of the TCS lab since 1990.
2. Administrative in-charge for the artificial intelligence lab 1992 - 1997.
3. Member, Board of Academic Courses (1988 - 1990), (1991 - 1993), (1995-1997).
4. Member, Library Advisory Committee (1990 - 1992).
5. GATE'88, Chief Co-ordinator for Numerical Computing and Data Structure Part.
6. JEE - 94, Chief Examiner.
7. Member, Selection Board, DRDO Post Graduate Training Programme and User Oriented Programme (M.Tech) 1993, 1994, 1996.
8. Member, GATE Committee, 1995-1997.
9. GATE 96, Chief Examiner.
10. Faculty Advisor for B.Tech Students, 1992-1996.
11. Faculty Advisor for M.Tech Students, 1996-1997.
12. Head-in-charge, Department of Computer Science & Engineering, May-June, 1996.
13. Warden, Narmada Hostel, 1998-2000.
14. Chief Examiner, GATE 98, 2000.
15. Head, Dept. of Computer Science & Engg., October 1998 - August 2001.

# PUBLICATIONS

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## I. Appeared in Refereed Journals

1. Arpita Patra, Ashish Choudhury, **C. Pandu Rangan**: Efficient Asynchronous Verifiable Secret Sharing and Multiparty Computation. *Journal of Cryptology* January 2015, Springer, Volume 28, Issue 1, pp 49-109 (2015)
2. Arpita Patra, Ashish Choudhury, **C. Pandu Rangan**: Asynchronous Byzantine Agreement with optimal resilience. *Distributed Computing* April 2014, Springer, Volume 27, Issue 2, pp 111-146 (2014)
3. Sangeetha Jose, Akash Gautam, **C. Pandurangan**: A New Certificateless Blind Signature Scheme. *JoWUA, ISYOU* 5(1): 122-141 (2014)
4. Kunwar Singh, **C. Pandu Rangan**, A. K. Banerjee: Lattice Based Efficient Threshold Public Key Encryption Scheme. *JoWUA, ISYOU* 4(4): 93-107 (2013)
5. Sangeetha Jose, Preetha Mathew K. and **C. Pandu Rangan**: Strongly Secure Password Based Blind Signature for Real World Applications. *Infocommunications Journal* 5(3): 22-29 (2013).
6. S. Sree Vivek, S. Sharmila Deva Selvi, Ramarathnam Venkatesan, **C. Pandu Rangan**: A Special Purpose Signature Scheme for Secure Computation of Traffic in a Distributed Network. *JoWUA, ISYOU* 3(4): 46-60 (2012)
7. S. Sree Vivek, S. Sharmila Deva Selvi, Salini Selvaraj Kowsalya, **C. Pandu Rangan**: PKI Based Signcryption without Pairing: an Efficient Scheme with Tight Security Reduction. *JoWUA, ISYOU* 3(4): 72-84 (2012)
8. Ashwinkumar Badanidiyuru, Arpita Patra, Ashish Choudhury, Kannan Srinathan, **C. Pandu Rangan**: On the trade-off between network connectivity, round complexity, and communication complexity of reliable message transmission. *Journal of ACM* Vol 59 (No 5): 22, 2012.
9. S. Sree Vivek, S. Sharmila Deva Selvi, V. Radha Kishan, **C. Pandu Rangan**: Efficient Conditional Proxy Re-Encryption with Chosen Cipher Text Security. *IJNSA*, 2012
10. Preetha Mathew K, Sachin Vasant, Sridhar Venkatesan, and **C. Pandu Rangan**: A CCA2 secure Code based encryption scheme in the Standard Model, *Journal on Computing*. JoC - Print ISSN: 2010-2283, Volume 2 No 1, 2251-3043 (April 2012)
11. S. Sharmila Deva Selvi, S. Sree Vivek, **C. Pandu Rangan**: Identity Based Ring Signcryption Schemes Revisited. *Journal of Math-for-Industry-2011A*, Springer 2011.



12. T. V. Thirumala Reddy, **C. Pandu Rangan**: Variants of Spreading Messages. *Journal of Graph Algorithms and Applications*. Vol 15 (No 5): 683-699, 2011.
13. Ashish Choudhury, Arpita Patra, B. V. Ashwinkumar, Kannan Srinathan, **C. Pandu Rangan**: Secure message transmission in asynchronous networks. *Journal of Parallel and Distributed Computing*, Elsevier Vol 71 (No 8): 1067 – 1074, 2011.
14. Arpita Patra, Ashish Choudhury, **C. Pandu Rangan**, Kannan Srinathan: Unconditionally reliable and secure message transmission in undirected synchronous networks: possibility, feasibility and optimality. *IJACT* Vol 2 (No 2): 159 – 197, 2010.
15. Balasubramanian Sivan, S. Harini and **C. Pandu Rangan**. On Conditional Covering Problem. Appears in *Mathematics in Computer Science, Springer 3(1): 97-107 (2010)*.
16. Arpita Patra, Ashish Choudhary, **C. Pandu Rangan**, Kannan Srinathan and Prasad Raghavendra, Perfectly Reliable and Secure Message Transmission Tolerating Mobile Adversary, *International Journal of Applied Cryptography (IJACT)*, Vol. 1(3), pp. 200 – 224, 2009.
17. Arvind Narayanan, K. Srinathan and **C. Pandu Rangan**: Perfectly Reliable Message Transmission, *Inf. Process. Lett, (IPL)*, Vol 100(1), pp 23-28, 2006.
18. V. Guruswami, **C. Pandu Rangan**, M.S. Chang, G.J. Chang and C.K. Wong, The  $K_r$ -Packing Problem, *Computing* Vol. 66, pp. 79 – 89 (2001).
19. Lakshminarayanan Subramanian, Muralidhar Talupur, Kamala Krithivasan and **C. Pandu Rangan**, On the Generative Power of Simple H Systems, *Journal of Automata, Languages and Combinatorics* Vol. 5, pp. 457 – 473 (2000).
20. D. Arun Kumar and **C. Pandu Rangan**, Approximation Algorithms for the Traveling Salesman Problem with Range Condition, *Theoretical Informatics and Applications*, Vol. 34, pp. 173 – 181 (2000).
21. Ravi Kant, S. Felsner, **C. Pandu Rangan** and D.Wagner, The Complexity of Partial Order Properties Order, Vol. 17, pp. 179 – 193 (2000).
22. V. Guruswami and **C. Pandu Rangan**, Algorithmic aspects of clique traversal and clique independent set, *Discrete Applied Mathematics*, Elsevier, Vol. 100, pp. 183–202 (2000).
23. A.Arvind, **C. Pandu Rangan**, Symmetric Min-Max heap: A simpler data structure for double-ended priority queue, *Information Processing Letters*, Elsevier, Vol. 69, pp. 197 – 199 (1999).
24. **C. Pandu Rangan**, K. R. Parthasarathy, V. Prakash, On The g-Centroidal Problem in Special Classes of Perfect Graphs, *Ars Combinatoria*, Vol. 50, pp. 267 – 278 (1998).
25. D.G. Kirkpatrick, K. Madhukar, **C. Pandu Rangan**, A.Srinivasan, Partial and Perfect Path Covers of Cographs. *Discrete Applied Mathematics*, Elsevier, Vol. 89, pp. 143 – 153 (1998).

26. V. Prakash, K.R. Parthasarathy, *C. Pandu Rangan*, The Deuchet Conjecture, *Int JI of Pure and Applied Maths*, Vol. 29, pp. 447 – 459 (1998).
27. M.S. Chang, P. Nagavamsi, **C. Pandu Rangan**, Weighted Irredundance in Interval Graphs, *Inform. Proc. Letters*, Elsevier, Vol. 66, pp. 65 – 70 (1998).
28. V. Guruswami and **C. Pandu Rangan**, A natural family of optimization problem with arbitrary small approximation thresholds. *Inform. Proc. Letters*, Elsevier, Vol. 68, pp. 241 – 248 (1998).
29. G.Venkatesan, U.Rotics, M.S.Madan Lal, J.A.Makovsky, **C. Pandu Rangan**, Restrictions of Minimum Spanners Problem, *Information and Computation*, Elsevier, Vol. 136, pp. 143 – 164 (1997).
30. K.S. Easwarakumar, S.V. Krishnan, **C. Pandu Rangan**, S. Seshadri, Optimal Parallel algorithm for finding st–ambitus of a Planar Biconnected Graphs, *Algorithmica*, Springer, Vol. 15, pp. 242 – 255 (1996).
31. C.R. Satyan, **C. Pandu Rangan**, The Parity Path Problem on some subclasses of Perfect Graphs, *Discrete Applied Maths*, Elsevier, Vol. 68, pp. 293 – 302 (1996).
32. R.F.M. Aranha, **C. Pandu Rangan**, An efficient Distributed algorithm for centering of a spanning tree of a biconnected graph, *Information Proc Letters*, Elsevier, Vol. 59, pp. 145 – 150 (1996).
33. V. Balachandran, P. Nagavamsi, **C. Pandu Rangan**, Clique Traversal and Clique Independence of Comparability Graphs, *Information Processing Letters*, Elsevier, Vol. 58, pp. 181 – 184 (1996).
34. M.S. Madanlal, G. Venkatesan, **C. Pandu Rangan**, Tree 3-Spanners on Interval, Permutation and Regular bipartite Graphs, *Inform. Proc. Letters*, Elsevier, Vol. 59, pp. 97 – 102 (1996).
35. V. Balachandran, **C. Pandu Rangan**, All-Pairs-shortest-length on Strongly Chordal graphs, *Discrete Applied Mathematics*, Elsevier, Vol. 69, pp. 169 – 182 (1996).
36. G. Venkatesan, **C. Pandu Rangan**, Approximate Triclique Coloring For Register Allocation. *Inform. Proc. Letters*, Elsevier, Vol. 60, pp. 249 – 253 (1996).
37. K. Arvind, V. Kamakoti, **C. Pandu Rangan**, Efficient parallel Algorithms on Permutation Graphs, *Jl of Parallel and Distributed Computing*, Elsevier, Vol. 26, pp. 116 – 124 (1995).
38. G. Srikrishna, **C. Pandu Rangan**, Optimal Parallel Algorithms for Path Problems on Planar Graphs, *Theoretical Computer Science*, Elsevier, Vol. 145, pp. 27 – 43 (1995).
39. K. Madhukar, D. Pavan Kumar, **C. Pandu Rangan**, R. Sundar, Systematic Design of an Algorithm for Biconnected Components. *Science of Programming.*, Springer, Vol. 25, pp. 63 – 77 (1995).

40. C.P. Gopalakrishnan, **C. Pandu Rangan**, A Linear Algorithm for the Two Path Problem on Permutation Graphs, *Discussions Mathematica - Graph Theory* Vol. 15, pp.147 – 166 (1995).
41. C.P. Gopalakrishnan, **C. Pandu Rangan**, Edge Disjoint Paths in Permutation Graphs, *Discussiones Mathematicae - Graph Theory*, Vol. 15, pp. 59 – 72 (1995).
42. C.P. Gopalakrishnan, C.R. Satyan, **C. Pandu Rangan**, Efficient Algorithms for Minimal Disjoint Path Problems on Chordal Graphs. *Discussiones Mathematicae - Graph Theory*, Vol. 15, pp. 119 – 145 (1995).
43. C.R. Satyan, **C. Pandu Rangan**, Feedback Vertex Set Problem on Cocomparability Graphs, *Networks*, Wiley, Vol. 26, pp. 101 – 111 (1995).
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232. G. D. S. Ramkumar, **C. Pandu Rangan**: Parallel Algorithms on Interval Graphs. ICPP (3) 1990: 72-74
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## IV. Refereed National Conferences

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245. K.S. Easwarakumar, **C. Pandu Rangan**, An Algorithm for Tripartition Of Triconnected Graph. (Appeared in) *Proceedings of NSTCS held at Kharagpur*, (1993).
246. V.K. Anuradha, **C. Pandu Rangan**, An Efficient Algorithm for Domination Problem on Circular Permutation Graphs. (Appeared in) *Proceedings of NSTCS held at Kharagpur*, (1993).

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**PROJECT/RESEARCH GUIDANCE**

<b>DEGREE</b>	<b>GUIDED</b>	<b>ON GOING</b>
Ph.D.	12	2
M.S.	30	3
M.Tech.	75	0
B.Tech/M.Tech (Dual Degree)	5	0
B.Tech.	109	0

# Research Guidance

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## 1. Doctor of Philosophy

1. **Sangeetha Jose**, *Variants of Provably Secure Blind Signature Schemes*, (2015)
2. **Preetha Mathew K**, *Studies on Code based Cryptosystems*, (2015)
3. **S. Sree Vivek**, *Studies on some Encryption, Signature and Signcryption Schemes*, (2012).
4. **S. Sharmila Deva Selvi**, *Design and Analysis of Provably Secure Public Key Cryptosystems*, (2012).
5. **Arpita Patra**, *Studies on Verifiable Secret Sharing, Byzantine Agreement and Multi-party Computation*, (2010).
6. **Ashish Choudhury**, *Protocols for Reliable and Secure Message Transmission*, (2010).
7. **Kannan Srinathan**, *Secure Distributed Communication*, (2007).
8. **V. Prakash**, *Convexity Studies in Graphs.*, (1996). [Co-guide: Prof. K.R. Parthasarathy].
9. **M. Wilscy**, *MAPS: A Multi-Agent Production System* , (1995). [Co-guide: Prof. R. Nagarajan].
10. **V.Kamakoti**, *Randomised Algorithms for Proximity Problems and Reliable Circuit Design*, (1995).
11. **K.S. Easwarakumar**, *Graph Decomposition Techniques and Efficient Graph Algorithms*, (1994).
12. **T.V.D. Kumar**, *Applications of Reason Maintenance Systems in Multi-agent Planning*, (1994). [Co-guide: Prof. R. Nagarajan].

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## 2. Master of Science (By Research)

1. **Prateek Barapatre**, *On Identification Schemes in Identity-based Setting and Ad-hoc Systems*, (2014)
2. **William Kumar Moses Jr.**, *Study of Rational Secret Sharing Over an Asynchronous Broadcast Channel*, (2012).
3. **R.Shyam Sundar** *Efficient Algorithms for Spatial and Bit-depth "Scalable Video Coding"*, (2011).
4. **Chaya Ganesh**, *Secure Two-Party and Multi-Party Computation Protocol*, (2012).
5. **Esha Ghosh**, *Hamiltonicity and Largest Path Problem on Special Classes of Graphs*, (2011).
6. **Shivank Agrawal**, *On Some Provable Secure Signature Schemes*, (2010).
7. **Dintyala Sai Krishna**, *Graph Decompositions and Graph Searching*, (2010).
8. **T.V. Thirumala Reddy**, *Guarding and Variants of Spreading Messages - Complexity and Approximation*, (2010).
9. **Amjed Shareef** , *The Byzantine Agreement Problem*, (2009).
10. **Shaik Maleka** , (2009).
11. **S.Harini**, *Facility Location Problems in Special Class of Graphs*, (2008).
12. **P. Krishna Prasad**, *Privacy Preserving Data Mining Algorithms*, (2008).
13. **Meena Singh**, *Privacy Preserving Database Operations*, (2007).
14. **Krishnasuri Narayanam**, *Protecting Server Privacy in Private Information Retrieval Schemes*, (2006).
15. **N. Tharani Rajan**, *Sharing a Set of Secrets : Non-perfect and Non-deterministic Approaches*, (2005).
16. **B. Prabhu**, *Efficiency Considerations in Secure Distributed Computation*, (2003).
17. **K. Srinivas**, *Adaptive Forward Error Correction for ATM/WATM Networks*, (2002).
18. **D. Arun Kumar**, *Approximation Algorithms for Some NP-Hard Optimization Problems*, (2001).
19. **K. Srinathan**, *Secure Distributed Protocols: Construction and Complexity*. (2001).

20. **R. Ganesh**, *Design and Implementation of Tutoring Systems - The Intermediate Control Approach*, (1999).
21. **N.S. Janaki Latha**, *Investigations on Proximity Problems in Colored Point Sets*, (1996).
22. **V. K. Anuradha**, *Efficient Algorithms on Some Special Classes of Graphs*, (1994).
23. **Saptarshi Mahesh**, *Efficient Dynamic Job Scheduling Algorithms for Multiprocessor Systems*, (1994). [Co-guide: Dr. C. Siva Ram Murthy].
24. **V. Balachandhran**, *Efficient Algorithms for Domination and Path Problems on Some Special Classes of Graphs*, (1994).
25. **A. Raman**, *Studies on Algorithmic Aspects of Special Classes of Perfect Graphs*, (1993).
26. **G. Srikrishna**, *Efficient Sequential and Parallel Algorithms for Path Problems on Planar Graphs*, (1992).
27. **V. Kamakoti**, *Algorithmic Aspects of Permutation Graphs*, (1992).
28. **K. Karunakaran**, *Efficient Systolic Graphs Algorithms*, (1992).
29. **A. Srinivasa Rao**, *Efficient Sequential and Parallel Algorithms on Interval Graphs*, (1989).
30. **K. Balasubramanian**, *Design of a Programming Language for Distributed Processing*, (1984).



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### 3. Master of Technology

1. **Dipanjan Das**, *An Identity Based Encryption Scheme Resilient to RAM Scraper Like Malware Attacks*, (2015)
2. **Arjunlal B**, *An Efficient Hash Tree Based Forward Secure Signcryption Scheme*, (2015)
3. **Aashima Bhatia**, *Reoptimization of Shortest Total Path Length Spanning Tree*, (2015)
4. **Virat Goyal**, *Automated Anomaly Detection in Surveillance*, (2015)
5. **Nitesh Bhargava**, *Extended Local Search Algorithm for Balls and Bins*, (2014)
6. **Anamica Meena**, *Hospitals / Residents problem under social stability with ties*, (2014)
7. **Bhagalaxmi Naik**, *Algorithmic aspects of Majority Problem*, (2014)
8. **Rajeev Gandham**, *Condition Based Proxy Re-Encryption without using Bilinear Pairings*, (2013)
9. **S Abhiram** *Estimation of Keysize and Safe CRYPTO-PERIODS For Elliptic Curve Digital Signature Algorithms*, (2012.)
10. **Aneesh Nanda** *Implementation and Security Strength Analysis of Keyed-Hash Message Authentication Codes based on all SHA Algorithms in MATLAB and proposed improvement in HMAC*, (2012).
11. **Akshay Chuloo** *RSA Based Hierarchical Access Control Simulator and Performance Evaluation*, (2012)
12. **Sorabh Malhotra** *Estimation of Key Size and Performance Evaluation of Block Cipher*,(2012).
13. **V Prashanth** *Empirical Analysis of Security Properties of Hash Functions*, (2011).
14. **K.R Sabarinath** *Key Management For Signature Schemes*, (2011).
15. **Subashini Venugopal** *Attribute Based Cryptology*, (2011).
16. **Kishore Kumar Yarramshetty**, *Secure and Collusion-free Protocol for Ranking Game*, (2010).
17. **Nisha K.K.**, *Identity Based Online/Offline Signcryption*, (2010).
18. **Manila M.V.**, *Identity Based Signcryption in the Standard Model*, (2010).
19. **Sakhi S.Anand**, *Identity Based Ring Signcryption with Public Verifiability*, (2010).

20. **Sobin C.C.**, *PKI to IDB Proxy Re-Signature Transformations*, (2010).
21. **Abhishek Srivastava**, *Study of Domatic Partition and Variant of Efficient Domination*, (2009).
22. **Gopinath Sikha**, *An Adaptable Designated Group Signature*, (2009).
23. **Modi Naineshkumar J**, *Domination on Special Classes of Graph*, (2009).
24. **Rohit Singh**, *A Fault Tolerance Mechanism for Wireless Sensor Networks Using Quasi-Unit Disk Graph Communication Model*, (2009).
25. **Sandeep Jangid**, *Study of Domination in Graph*, (2009).
26. **Ambika K.**, *Non-interactive Proxy Re-encryption from Signcryption*, (2008).
27. **Chandrasekar S.**, *Unidirectional Proxy Re-encryption from Signcryption*, (2008).
28. **Shayer Dudekula**, *Finding the Core of Specified Length in Chordal Graphs*, (2008).
29. **Srinivas A.**, *Finding the Corepath of Sepcified Length in Hamiltonian Permutation Graphs*, (2008).
30. **Vinod Kumar N.**, *On Uniquely Restricted Matching*, (2008).
31. **Anil Kumar Kothuri**, *Privacy Preservation of Clustering Algorithms*, (2007).
32. **Madhu Gayatri**, *Perfectly Reliable Message Transmission*, (2007).
33. **Karthikeyan K.**, *Implementation of RSA-KEM - An Asymmetric Encryption Primitive*, (2005).
34. **Kiran Prasad Juthi**, *Empirical Studies of the Weil Pairing Based Techniques*, (2005).
35. **Naresh Sankineni**, *Studies on Undeniable Signatures*, (2005).
36. **Ramesh Srinivasan**, *A Study of Private Information Retrieval Schemes*, (2005).
37. **Vasanth Kumar B.J.**, *Studies on Digital Signatures*, (2005).
38. **Vasan S.**, *Implementation of RSA-PSS Signature Scheme*, (2005).
39. **Vinod Kumar P.M.**, *Fair Exchange Protocol for RSA Signatures*, (2005).
40. **Badhrinath Santhaanam**, *Uniform Random Allocations - Multiple Choice Algorithms with Unfair the Breaking*, (2005).
41. **Rosarin Jolly Roy**, *Uniform Random Allocations - Multiple Choice Algorithms with Random the Breaking*, (2005).
42. **Devender Kumar**, *General Verifiable  $(k, t, n)$  Anonymous Encryption Scheme*, (2004).

43. **Hemantraj Batakurki**, *Verifiable 1-Out-N Anonymous Encryption Scheme*, (2004).
44. **Manjunatha M.**, *An application of Double Signature schemes for Electronic Business Transactions*, (2004).
45. **P. Balasubramaniam**, *FPGA Realization of Modular Exponentiation for Public Key Cryptography*, (2003).
46. **Binu Raghavan**, *FPGA Realization of Block Cipher Algorithms - RC6 and Cast 256*, (2003).
47. **K. Indra Kumar**, *FPGA Realization of Block Cipher Algorithm - IDEA and Rijndael*, (2003).
48. **Kalyan Gupta**, *FPGA Realization of RIPEMD-160*, (2003).
49. **Rajiv Roy**, *FPGA Realization of Hash Based Message Authentication Code and Secure Hash Algorithm*, (2003).
50. **Sooraj K Ambat**, *FPGA Realization of Key Generation for Public Key Algorithms*, (2003).
51. **Tarique Ahsan Nezami MD**, *FPGA Realization of Message Authentication Code using Universal Hashing*, (2003).
52. **Arvind Kumar**, *CALTOOL : An Integrated CAL Development Tool-Frame Package and Applets*, (1996).
53. **D.K. Goswami**, *CALTOOL : An Integrated CAL Development Tool-Info Package and Applets*, (1996).
54. **G.G. RAO**, *CALTOOL : An Integrated CAL Development Tool-Info Package and Applets*, (1996).
55. **T.Venugopal**, *Animation of Path Planning Algorithms*, (1995).
56. **Shailesh Durgapal**, *Multi-Agent Production System for Distributed Problem Solving*, (1994).
57. **Anil Kumar Mishra**, *DPSEPs: Distributed Problem Solving Environment for Production Systems*, (1994).
58. **Akilandeswari S.**, *Framework for Distributed Cooperative Problem Solving - I*. (1993).
59. **Balaji Munagala.**, *Parallel Algorithms for Some Classes of Perfect Graphs on the Hypercube*. (1993).
60. **Krishna Shree A.**, *Framework for Distributed Cooperative Problem Solving - II*. (1993).

61. **Vijaya Kumar A.J.**, *A Fast Public Key Encryption Scheme for PC and E-Mail.* (1993).
62. **Laxman.**, *Implementation of a Distributed Production System for Problem Solving in C.* (1993).
63. **Ravi E.S.**, *Performance Study of Parallel Algorithms Using Simulator.* (1992).
64. **Sreekumar A.**, *Performance Analysis of Parallel Algorithms for Partial Differential Equations and 8-Puzzle Problems.* (1992).
65. **Kumar B.S.R.**, *Performance Analysis of Parallel AI Search Algorithms.* (1992).
66. **Ramprasad P.B.**, *The Two Path Problem and the All Bidirectional Edges Problem on Planar Graphs.* (1987).
67. **Patkar Sachin B.**, *Efficient Parallel Algorithms for Some Linear Matroid Theoretic Problems.* (1987).
68. **Venkatasubramanian S.**, *Algorithms on Cellular Automata,* (1986) [co-guide: Prof. Kamala Krithivasan].
69. **Vijayalakshmi G.**, *Animation of Algorithms.* (1986).
70. **Soundara Lakshmi S.**, *Studies on Maximum Empty Rectangle Problem.* (1986).
71. **Hari Krishna Prasad T.**, *New Sequential and Parallel Algorithms for the Maximum Empty Rectangle Problem.* (1986).
72. **Sitalakshmi R.**, *Efficient Two Dimensional Pattern Matching Algorithms.* (1986). [Co-guide Prof.Kamala Krithivasan]
73. **Rama Rao K.N.**, *Implementation of a Normalized Quadtree.* (1986).
74. **Sulaiman M.K.**, *Computer Recognition of Constrained Handprinted Devanagiri characters.* (1986).
75. **Sudarsana Rao P.**, *Linear Feature Quad Tree - A New Representation Scheme for Curvilinear Data.* (1986).

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#### 4. Dual Degree (B.Tech./M.Tech.)

1. **Varad Kirtane**, *RSA-Based Signcryption with Proxy Re-encryption*, (2008).
2. **Bharti Choudhary**, *A Key Management Scheme with Perfect Security and High Resilience in Sensor Networks*, (2006).
3. **Ravi Dixit**, *Secure Data Centric Protocol for Mobile Wireless Sensor Networks*, (2006).
4. **Prasad N.R.**, *Geometric Embeddings and the Graph Multicut Problem*, (2005).
5. **Arvind Narayanan**, *Computational Secret Sharing*, (2004).

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## 5. Bachelor of Technology

1. **Akshayram Sreenivasan**, *Obfuscation of Re-Encryption Program*, (2015)
2. **Akash Gautam**, *Certificateless Blind Signatures with Round Optimality*, (2011).
3. **P.N. Bhargav**, *Generic Efficient Signcryption Constructions*, (2011).
4. **Swarun Kumar Suresh Kumar**, *Provably Secure Signature Schemes with Advanced Mechanism for Anonymity*, (2010).
5. **Ananth Raghunathan**, *The Round Complexity of Verifiable Secret Sharing*, (2009).
6. **P Narendhranath**, *Guarding against a Helm Graph and Searching an Invisible Lazy Fugitive in a Graph*, (2009).
7. **Sriram Keelveedhi Ravinarayanan**, *An Error Correction Approach to Solve Sparse Overspecified Systems of Linear Equations*, (2009).
8. **Srivatsan Narayanan**, *Private Communication Complexity and Connectivity Requirements of Verifiable Secret Sharing*, (2009).
9. **Anirudh Gaddamanaugu**, *Performance Evaluation of Scheduling Algorithms in Optical Burst Switching Networks*, (2008).
10. **Ashwinkumar B.V.**, *Perfectly Reliable Message Transmission on Undirected Graphs*, (2008).
11. **Balasubramanian S.**, *Core Path in Special Classes of Graphs*, (2008).
12. **Naga Naresh Karuturi**, *Group Key Management using Broadcast Encryption*, (2008).
13. **Raghavendran G**, *Efficient Identity-Based Broadcast Signcryption Schemes*, (2008).
14. **Aravindan V.**, *Network Coding from a Game-Theoretic Perspective*, (2007).
15. **Karthekeyan C.**, *Secret Sharing for Commodity Schemes and Robust PIR Combiners*, (2007).
16. **Ravishankar Krishnaswamy**, *Fault Tolerant Network Coding*, (2007).
17. **Avinash Vaidyanathan V.**, *Reliable Communication*, (2006).
18. **Mukesh Meena**, *Elliptic Curve Cryptography*, (2006).
19. **Raja Masa**, *Pairing Based Cryptography*, (2006).
20. **Rajsekar M.**, *Obfuscation in Cryptography*, (2006).

21. **Ranjit Kumar K.**, *On Efficient Protocols for Reliable Communication in Networks*, (2006).
22. **Ravi Chandra Ch.**, *Approximation Algorithms for On-Demand Information Dissemination*, (2006).
23. **Aditya Y.S.V.**, *A Survey on Selected Intrusion Detection Systems*, (2005).
24. **Kamesh R.**, *The Steiner Tree Problem*, (2005).
25. **Srikanth Srinivasan**, *Using Communication Complexity and Branching Programs to Prove Lower Bounds*, (2005).
26. **Tirthankar Dubey**, *A Survey of Some Recent Developments in Secure Multiparty Computation Techniques*, (2005).
27. **Karthik S.**, *Party Halls, Knapsacks and other online problems*, (2004).
28. **Muthuramakrishnan V.**, *Distributed consensus over hypergraphs tolerating dual failures*, (2004).
29. **Ravikant D.V.S**, *Agreement on Synchronous Networks with local Broadcasts*, (2004).
30. **Srikanth V.**, *Optimal Protocols for Distributed Consensus Over Hypergraphs*, (2004).
31. **Amitanand Aiyer S.**, *Agreement Tolerating Faults*, (2003).
32. **Chandrashekhara N.**, *Secure Message Transmission in the Presence of Partial Faults*, (2003).
33. **Mohan R.**, *On Uniquely Restricted Matchings*, (2003).
34. **Ruchi Kapoor**, *Design of an Electronic Cash Protocol that Resists Criminal Attacks*, (2003).
35. **Sanketh Indrapu**, *Distributed Consensus*, (2003).
36. **Vinod V.**, *Efficient Secret Sharing and Oblivious Transfer*, (2003).
37. **Ashwin Kumar M.V.N.**, *Secure Communications*, (2002).
38. **Gopi Krishna S.**, *Non-Interactive Quantum Crypto-Computing*, (2002).
39. **Pranava Raja Goundan**, *Equal-Flows in Networks*, (2002).
40. **Sainath S.V.S.**, *Parallel Algorithm for Minimum Connected Domination in Trapezoid Graphs*, (2002).
41. **Krishnaram K.N.G.**, *Secure Distributed Protocols: Complexity and Approximation*, (2001).

42. **Sudhakar G.**, *A Linear Time Algorithm for Determining the Single Connectedness of a Directed Planar Graph*, (2001).
43. **Srinivasa Aditya Akella**, *Competitive Algorithms for Online Bin-Stretching*, (2000).
44. **Ajay C. Ramadoss**, *Lower bounds for the number of incomparable pairs in a poset of dimension  $n$* , (2000).
45. **Ananthan S.**, *Competitive Analysis of Some Online Optimization Problems*, (2000).
46. **Ajith Kumar M.N.**, *On Designing Efficient Priority Queues*, (2000).
47. **Udaya Bhanu G.**, *Better Lower Bound For Online Machine Covering*, (2000).
48. **Prasanth Reddy K.**, *On Heuristics to solve Real Time Vehicle Routing*, (2000).
49. **Arun Kumar Sahlam**, *Interactive Learning Environments for Theoretical Computer Science Education : Network Flow Algorithm Animations*, (2000).
50. **Arvind A.**, *Competitive Analysis of Online Load Balancing Problems*, (1999).
51. **Lakshminarayanan S.**, *TCP-New Boston : An Enhanced Protocol for ATM Networks*, (1999).
52. **Ravi Kant**, *Recognition Complexity of Partial Order Properties*, (1999).
53. **Anand Ganesh**, *Approximate Algorithms for Some Optimisation Problems*, (1999).
54. **Ravindra Shankar P.**, *Algorithmic and Hardness Results for Certain Graph Theoretic Problems*, (1998).
55. **Sridhar R**, *Buffering paradigm : A new technique to design worst-case efficient randomized data structures*, (1998).
56. **Rajasekar K**, *Probabilistic Data Structures for Priority Queues*, (1998).
57. **Narayanan Sriram Ramabhadran**, *Intractability Results For A Coloring Problem On Weighted Graphs*, (1998).
58. **Naveen Kumar K.M.**, *Algorithms Engineering : A novel approach towards experimental analysis and validation of formally proved systems*, (1998).
59. **Murali**, *Efficient Algorithms for Some Graph Theoretic Problems*, (1998).
60. **Satishchander S.**, *Recognition of Objects Moving on a Conveyor Using Fourier Descriptive Method*, (1997).
61. **Shyam Raghunanadan**, *Recognition of Objects Moving on a Conveyor Using Method of Moments*, (1997).
62. **Venkatesan G.**, *Intractability results for certain Graph-Theoretic Optimization and Approximation Problems*, (1997).



63. **Sadagopan S.**, *A Document Classifying System using the Self Organising Map for Text Mining*, (1997).
64. **Niranjan Neelakantan**, *Computer Based Learning*, (1996).
65. **Boyapati Chandrasekar**, *Worst Case optimal Data Structures for Priority Queues, Dequeue with Heap order and Parallel finger search trees*, (1996).
66. **Madan Lal M.S.**, *Tree 3 - Spanners and Bandwidth minimisation problems on special classes of graphs*, (1996).
67. **Srinivas G.**, *Develop An Off-line Path Planning Algorithm For a Robotic System With Moving Obstacles*, (1996).
68. **Rajagopalan S.**, *Develop a Vision Based Off-line Path Planning Program Using Visibility Graph Method For a Robotic System*, (1996).
69. **Subramanian K.**, *Vision Based On-line/ Off-line Path Planning for a Robotic System I*, (1995).
70. **Mani Rajesh**, *Vision Based On-line/ Off-line Path Planning for a Robotic System II*, (1995).
71. **Pankaj Kulkarni**, *The Tree 3-Spanner Problem on Some Special Class of Graphs*, (1995).
72. **Ramesh V.K.**, *Efficient Algorithms for connectivity and Path problems on Some Special Classes of Graphs*, (1995).
73. **Ramakrishna V**, *Competitive Number Problem on Interval Graphs*, (1995).
74. **Madhukar K.** *Domination Problems on Trapezoid and Cotriangulated Graphs*, (1994).
75. **Anand S.**, *Treewidth and Core Problems on Recursively Defined Classes of Graphs*, (1994).
76. **Balaji R.**, *Transitive Reduction Paradigm to Solve Domination Problems on Interval graphs*, (1994).
77. **Gopalakrishnan C.P.**, *Disjoint Paths in Permutation and Chordal Graphs*, (1994).
78. **Bobby V.R.**, *A Framework for Negotiation in Distributed Problem Solving - I*, (1993).
79. **Jayanth Majhi**, *A Framework for Negotiation in Distributed Problem Solving - II*, (1993).
80. **Hari Balakrishnan**, *Efficient Algorithms for Asteroidal Triple-Free and Distance Hereditary Graphs*, (1993).
81. **Nagavamsi P.**, *Domination and other related Problems on certain Classes of Perfect Graphs*, (1993).

82. **Anand R.**, *Graph Decomposition Techniques for Efficient Algorithm Design*, (1993).
83. **Satyan C.R.**, *Ordering of Vertices - An Application Specific Paradigm*, (1992).
84. **Balayoghan V.B.**, *Efficient Sequential and Parallel Algorithms on Interval Graphs*, (1991).
85. **Ravi Sundaram**, *2-Link Isothetic Visibility in Orthogonal Polygons*, (1991).
86. **Selvan Kulandaiswami**, *Efficient Algorithms for Circular Permutation Graphs*, (1991).
87. **Jayaram T.S.**, *Efficient Algorithms on Block Graphs*, (1990).
88. **Ramesh K.**, *An Implementation of Quinton's Strategy for Systematic Design of Systolic Arrays*, (1990).
89. **Mahesh R.**, *Domination and Path Problems in Permutation Graphs*, (1989).
90. **Aravind S.**, *Fast Algorithms for Some Problems on Interval and Permutation Graphs*, (1989).
91. **Ravi**, *Irredundance and Location-Domination in Interval Graphs*, (1989).
92. **Paramasivam**, *Experimental Studies on Probabilistic Analysis of Algorithms*, (1989).
93. **Madhav Vishnu Marathe**, *Efficient Algorithms on Interval Graphs*, (1989).
94. **Bulusu Krishna Mohan**, *Recognition Algorithms for Triangulated Graphs*, (1988).
95. **Rajeev G.**, *Some Parallel Algorithms in Motion Planning and Collision Avoidance*, (1988).
96. **Venkatesh Harinarayan**, *Fast Parallel Algorithms for Some Geometric Problems*, (1988).
97. **Krishnan S.V.**, *Efficient Algorithms for Some Problems on Planar Graphs*, (1988).
98. **Seshadri**, *Efficient Algorithms for Some Path Problems on Chordal Graphs*, (1988).
99. **Anil Sathyanarayana Rao**, *Efficient Systolic Algorithms for Interval Graph Problems*, (1988).
100. **Babu Ozhur Narayanan**, *New Sequential and Parallel Algorithms for Diameter Partitioning*, (1988).
101. **Kodiyaklam Vijay**, *A Survey of Lower Bound Theory*, (1987).
102. **Sundar R.**, *Finding the Abiding Paths and Its Applications*, (1987).
103. **Ramesh Govindan**, *Fast Geometric Algorithms for Location Problems*, (1987).
104. **Ramalingam G.**, *Domination Problems in Intersection Graphs*, (1987).

105. **Krishna Prasad B.**, *Graph Problems on a Linear Systolic Array*, (1986).
106. **Atul Saini**, *Graph Problems on a Broadcast-Mesh Processor Array*, (1986).
107. **Sudarshan S.**, *A Fast Algorithm for Computing Sparse Visibility Graphs*, (1986).
108. **Mohan R.**, *A Survey of Methods for Union-Find Problems*, (1986).
109. **Nainan Kovoov**, *Finding Optimal Aggregates in Arrays*, (1984).