<div align="center">
Curriculum Vitae of

Sanguthevar Rajasekaran
</div>

Current Address: 257 ITEB, Dept. of CSE, 371 Fairfield Road, Storrs,
CT 06269; (860) 486 2428; rajasek@engr.uconn.edu

Citizen of: the USA;

Degrees

Year	Degree	Institution
1988	Ph.D. in Computer Science	Harvard University (Advisor: **John H. Reif**)
		Thesis Title: **Randomized Parallel Computation**
1983	M.E. in Automation	Indian Institute of Science
1981	B.E. in Electrical Technology	Indian Institute of Science
1977	B.Sc. in Special Physics	Madurai Kamaraj University

Areas of Expertise

• Algorithms and Complexity; • Big Data Analytics; • Bioinformatics and Computational Biology;
• Parallel and High-Performance Computing; etc.

Honors and Awards

- Fellow of the AAAS.

- Fellow of the IEEE.

- Member, Connecticut Academy of Science and Engineering (from May 2005). Members are elected on the basis of their accomplishments in Science and Engineering and/or technology. Membership to this academy is limited to 200 by statute.

- School of Engineering Outstanding Teaching Award, Univ. of Connecticut, 2004.

- Outstanding CSE Faculty of the Year Award, University of Connecticut, 2005.

Selected Research Fundings

1. **PI: S. Rajasekaran**, "Randomized Parallel Algorithms," Research Initiation Award, National Science Foundation, $75,000, 1992-95.

2. **PI: S. Rajasekaran**, "Randomized Parallel Algorithms," National Science Foundation, $60,000, 1995-97.

3. **Co-PI: S. Rajasekaran**, "Using Parallelism and Randomness in the Analysis of Large-Scale Real-Time Systems," **PI:** Insup Lee, National Science Foundation, CCR93-11622, $ 200,000. Sept. 1993 – Aug. 1996.

4. **Co-PI: S. Rajasekaran**, "High-Performance Environmental Models and Class Libraries of Parallel Algorithms," **PI:** Peter Sheng, Environmental Protection Agency, $768,015, Jan. 1997-Dec. 2000.

5. **Co-PI: S. Rajasekaran**, "Mainstreaming Parallel and Distributed Computing in the Computer Science Undergraduate Curriculum," **PI:** Sanjay Ranka. Other **Co-PIs:** Gerhard Ritter, Sartaj Sahni, and Theodore J. Johnson. National Science Foundation, $391,565, 9-1-96 to 8-31-99,

6. **PI: S. Rajasekaran**, "Integrating Randomization Techniques in the Undergraduate and Graduate Curricula," **Co-PIs:** Randy Chow, Linda Crocker, Panos Pardalos, Sanjay Ranka, Gerhard Ritter, Sartaj Sahni, Stanley Su, Baba Vemuri. National Science Foundation, $372,312, August 1998 to July 2001.

7. **PI: S. Rajasekaran**, "An Algorithmic Evaluation of Optical Architectures," **Co-PI:** Sartaj Sahni. National Science Foundation, $280,000, August 2000 to July 2003.

8. **PI: S. Rajasekaran**, "Very Fast Modeling Tools for Fuel Cells," **Co-PI:** R. Ammar, US Army, $68,242, January 2003 to December 2003.

9. **PI: S. Rajasekaran**, "ITR: Information Extraction from Massive Data Sets," **Co-PIs:** Sartaj Sahni, Tom Cormen, Reda Ammar, Chun-Hsi Huang, Panos Pardalos, N. Prabahkar, Dong-Guk Shin. National Science Foundation, $1,231,000, September 2003 to August 2008.

10. **Co-PI: S. Rajasekaran**, "Transformation Spaces, Specifications, and Characterizations," **PI: Ian Greenshields**, **Co-PIs:** Reda Ammar, Steve Demurjian, Krishna Pattipati, Alex Russell. DARPA, $500,000, January 2004 to December 2004.

11. **PI: S. Rajasekaran**, "Randomization Methods in Algorithm Design," **Co-PIs:** P.M. Pardalos and J. Rolim, National Science Foundation and New Jersey Commission of Science and Technology, Workshop Funding, $15,000, December 1997.

12. **PI: S. Rajasekaran**, "Mobile Networks and Computing," **Co-PIs:** B.R. Badrinath, P.M. Pardalos and F. Hsu, National Science Foundation and New Jersey Commission of Science and Technology, Workshop Funding, $15,000, March 1999.

13. **Co-PI: S. Rajasekaran**, "International Workshop on Bio-Grid Computing," **PI:** C.-H. Huang, National Institutes of Health, $100,000, January 2005 to December 2010.

14. **Co-PI: S. Rajasekaran**, "High Performance Techniques and Tools for Aircraft Diagnosis and Prognosis," **PI:** Reda A. Ammar, Pratt and Whitney, $18,000, Fall 2005.

15. **Co-PI: S. Rajasekaran**, "An Advanced Multi-core Micro-server Development System," **PI:** Reda A. Ammar, Pratt and Whiney, $25,000, Fall 2006.

16. **Co-PI: S. Rajasekaran**, "An Advanced Multi-core Micro-server Development System," **PI:** Reda A. Ammar, AVETeC, $100,000, May 1, 2007 to April 30, 2008.

17. **Co-PI: S. Rajasekaran**, "Building Motif Lexicons", **PI:** Matrin Schiller, National Institutes of Health, $1,120,000, June 2007 to May 2011.

18. **PI: S. Rajasekaran**, "U.S.-Egypt Cooperative Research: High Performance Techniques for Remote Sensing", **Co-PI:** R.A. Ammar, NSF, $89,989, January 2008 to December 2009.

19. **Co-PI: S. Rajasekaran**, "US-Egypt International Workshop on Supercomputing Applications in Climate Sciences and Remote Sensing", March 17-19, Cairo, Egypt **PI:** I. Greenshields, **Co-PI:** R.A. Ammar, NSF, $47,721, January to June 2008.

20. **Co-PI: S. Rajasekaran**, "Collaborative Research: CRI: IAD: Developing a Novel Infrastructure for Underwater Acoustic Sensor Networks **PI:** J. Cui, NSF, $319,998, July 2007 to June 2010.

21. **Co-PI: S. Rajasekaran**, "Botnet Detection and Migration", Sonalysts Inc., Phase II SBIR Grant, Dept. of Homeland Security, $229,004, June 2007 to May 2009.

22. **PI: S. Rajasekaran**, "Data Integration Techniques", Connecticut Health Information Network, $47,000, Jan. 2008 to June 2008.

23. **PI: S. Rajasekaran**, "Data Mining Techniques for Drug Discovery", Boehringer-Ingelheim, $18,000, March 2010 to July 2010.

24. **PI: S. Rajasekaran**, "EMT/NANO: Computing with Protein Based Associative Memory Processors," **Co-PIs:** R. Birge, V. Kumar, and S. Sahni, NSF, $749,999, September 2008 to August 2011.

25. **PI: S. Rajasekaran**, "Data Integration Techniques," UCHC Institute for Public Health Research (IPHR), $30,000, August 2009 to July 2010.

26. **Co-PI: S. Rajasekaran**, "Real-Time Monitoring of Transportation Vulnerability," **PI:** R.A. Ammar, **Co-PI:** N. Lownes, Department of Homeland Security, July 1, 2009 - June 30, 2010, $100,000.

27. **PI: S. Rajasekaran**, "Data Integration Techniques," UCHC Institute for Public Health Research (IPHR), $30,000, August 2010 to July 2011.

28. **PI: S. Rajasekaran**, "Data Integration Techniques," UCHC Institute for Public Health Research (IPHR), $30,000, August 2011 to July 2012.

29. **Co-PI: S. Rajasekaran**, "Risk, Resilience and Response Models with Applications to High Speed Rail Transportation," **PI:** N. Lownes, **Co-PI:** R. Ammar, Department of Homeland Security, July 1, 2010 to June 30, 2012, $200,000.

30. **Co-PI: S. Rajasekaran**, "The effects of Impurities on Fuel Cell Performance and Durability," Department of Energy, March 2007 to February 28. 2011, $1.9M.

31. **Senior Personnel: S. Rajasekaran**, "MRI: Development of Instrumentation for an Autonomous UW Sensor Network," **PI:** J-H. Cui, **Co-PIs:** I. Babb, Z. Shi, T. Torgerson and S. Zhou, **Senior Personnel:** R.A. Ammar, A. Bagtzoglou, Y. Fei, Y. Lei, L. Lui, E. Schultz, L. Wang, B. Wang and P. Willett, National Science Foundation - Computer & Information Science & Engineering, August 1, 2008 to July 31, 2011, $500,000.

32. **PI: S. Rajasekaran**, "Data Integration Techniques," UCHC Institute for Public Health Research (IPHR), $60,000, August 2012 to July 2013.

33. **PI: S. Rajasekaran**, "Data Integration Techniques," UCHC Institute for Public Health Research (IPHR), $60,000, August 2013 to July 2014.

34. **PI: S. Rajasekaran**, "Graduate Assistantship in Areas of National Need Project on Cloud Computing," **Co-PIs:** R.A. Ammar, J. Cui, I. Greenshields, and P. Luh, Department of Education, $400,000, August 2010 to July 2013.

35. **Co-PI: S. Rajasekaran**, "Graduate Assistantship in Areas of National Need Project on Advanced Computing," **PI:** R.A. Ammar, **Co-PIs:** S. Demurjian, J. Cui, and S. Zhou, Department of Education, $500,000, September 2009 to August 2012.

36. **PI: S. Rajasekaran**, "Efficient Algorithms for Motif Search," **Co-PIs:** R.A. Ammar, S. Sahni, and M. Schiller, National Institutes of Health, $1,505,429, September 30, 2010 to September 29, 2014.

37. **PI: S. Rajasekaran**, "First International IEEE Conference on Computational Advances in Bio and Medical Sciences (ICCABS) - Travel Awards," **co-PI:** I.I. Mandiou, NSF/CISE, February 1, 2011 to January 31, 2012, $20,000.

38. **PI: S. Rajasekaran**, "Second International IEEE Conference on Computational Advances in Bio and Medical Sciences (ICCABS) - Travel Awards", NSF/CISE, February 1, 2012 to January 31, 2013, $20,000.

39. **PI: S. Rajasekaran**, "Third International IEEE Conference on Computational Advances in Bio and Medical Sciences (ICCABS) - Travel Awards", NSF/CISE, February 1, 2013 to January 31, 2014, $12,000.

40. **Co-PI: S. Rajasekaran**, "Efficient Algorithms for Data Processing in Chemicals Detection,", **PI:** R.A. Ammar, Owlstone, Inc., July 1, 2013 to June 30, 2014, $75,000.

41. **PI: S. Rajasekaran**, "Big Data Analytics for Revenue Assurance," **Co-PI:** R.A. Ammar, Northeast Utilities, August 1, 2013 to January 31, 2014, $47,400.

42. **PI: S. Rajasekaran**, "Fourth International IEEE Conference on Computational Advances in Bio and Medical Sciences (ICCABS) - Travel Awards", NSF/CISE, February 1, 2014 to January 31, 2015, $12,000.

43. **Co-PI: S. Rajasekaran**, "Graduate Assistantship in Areas of National Need Project on Exascale Computing in Science and Engineering," **PI:** C.-H. Huang, **Co-PI:** M. Khan, Department of Education, $805,032, August 16, 2013 to August 15, 2016.

44. **Co-PI: S. Rajasekaran**, "CC-NIE Network Infrastructure: Enabling Data-intensive Research at the University of Connecticut Through Science DMZ," **PI: B. Wang**, NSF, $372,457, September 1, 2013 to August 31, 2016.

45. **PI: S. Rajasekaran**, "BIGDATA: F: DKA: DKM: Novel Out-of-core and Parallel Algorithms for Processing Biological Big Data," **Co-PIs:** J. Bi, J. Graf, S. Sahni, and G. Weinstock, National Science Foundation, $1,200,000, September 1, 2014-August 31, 2017.

46. **PI: S. Rajasekaran**, "Data Integration Techniques," UCHC Institute for Public Health Research (IPHR), $60,000, August 2014 to July 2015.

47. **PI: S. Rajasekaran**, "Big Data Solutions for Attack Forecasting," **Co-PIs:** R. Ammar and S. Gokhale, Comcast, $100,000, January 2015 through December 31, 2015.

48. **PI: S. Rajasekaran**, "A Cloud Enabled HPC Infrastructure for Materials Genomics, Big Data and Big Compute Sciences," **Other PIs:** R. Ramprasad, Y.-J. Shin, University of Connecticut, $1,400,000, July 1, 2015 through June 30, 2016.

49. **Co-PI:** S. Rajasekaran, "AF: Medium: A High Performance Computing Foundation to Whole-Genome Prediction," **PI:** Jinbo Bi, NSF, $750,000, August 1, 2015-July 31, 2018.

50. **Co-PI: S. Rajasekaran**, "AOI1 Wireless 3D Nanorod Composite Arrays based High Temperature Surface-Acoustic-Wave Sensors for Selective Gas Detection through Machine Learning Algorithms," **PI:** Yu Lei, **Co-PI:** Puxian Gao, Department of Energy, $400,000, September 1, 2015 to August 31, 2018.

Director of Dissertation Committees (Ph.D.)

1. Marius Nicolae, University of Connecticut (May 2016)
2. Manal Al-Harbi, University of Connecticut (December 2015)
3. Mahmoud Maghraby, University of Connecticut (May 2015)
4. Mai Hamdalla, University of Connecticut (February 2014)
5. Rania Kilany, University of Connecticut (June 2013)
6. Samir A. Mohamed, University of Connecticut (June 2013)
7. Tian Mi, University of Connecticut (June 2013)
8. Hieu Dinh, University of Connecticut (June 2012)
9. Vamsi Kundeti, University of Connecticut (June 2011)
10. Dolly Sharma, University of Connecticut (June 2011)
11. Sahar Al Seesi, University of Connecticut (June 2010)
12. Dragos Trinca, University of Connecticut (June 2009)
13. Mingjun Song, University of Connecticut (June 2009)
14. Vishal Thapar, University of Connecticut (June 2009)
15. Jaime Davila, University of Connecticut (June 2008)
16. Sudha Balla, University of Connecticut (June 2007)
17. Ahmed Mohamed, University of Connecticut (June 2006)
18. Jaeyong Lim, University of Florida (June 2003)
19. Jun Luo, University of Florida (June 2002)
20. Lixin Fu, University of Florida, 2001.
21. Jon Freeman, University of Pennsylvania, 1994.
22. Suneeta Ramaswami, University of Pennsylvania, 1994.
23. David Wei, University of Pennsylvania, 1991.

Current Ph.D. Students

1. Xingyu Cai
2. Abdullah-Al Mamun
3. Robert Martin
4. Sudipta Pathak
5. Subrata Saha
6. Zigeng Wang
7. Peng Xiao

Director of Thesis Committees (M.S.)

1. Priya Periaswamy, 2015

2. Jerlin Camilus Merlin, 2012

3. Seema Munavalli, 2012

4. Hieu Dinh, 2010

5. Vamsi Kundeti, 2009

6. Snigdha Verma, University of Connecticut, 2006.

7. Ramandeep Kaur, University of Connecticut, 2006.

8. Vishal Thapar, University of Connecticut, 2005.

9. Betsy Cheriyan, University of Connecticut, 2004.

10. Guanqun Zhang, University of Connecticut, 2004.

11. Madhurima Pawar, University of Florida, 2001.

12. Meenakshi Sundar, University of Florida, 2001.

13. Xiaoming Jin, University of Florida, 2000.

14. Vidyamani Parkhe, University of Florida, 2000.

15. Huang Chunbo, University of Florida, 1999.

16. Craig Hill, University of Florida, 1998.

17. Faruqi Faisal, University of Florida, 1997.

18. Yi Cao, University of Florida, 1996.

19. José C. Cogolludo, University of Pennsylvania, 1993.

20. Jon Freeman, University of Pennsylvania, 1990.

Publications Summary

The applicant has more than 400 scholarly papers in refereed journals, conferences, and books. Some highlights: • Invited chapters in 23 books; • Fifteen invited papers in international conferences and workshops and numerous other invited talks; • Widely cited in journals, conference proceedings, and books.

Books

1. E. Horowitz, S. Sahni, and S. Rajasekaran, *Computer Algorithms/C++*, W.H. Freeman Press, New York, 1997; Second Edition by Silicon Press, 2008.

2. E. Horowitz, S. Sahni, and S. Rajasekaran, *Computer Algorithms*, W.H. Freeman Press, New York, 1998; Second Edition by Silicon Press, 2008.

Edited Books

1. P. M. Pardalos and S. Rajasekaran, *Advances in Randomized Parallel Computing*, Kluwer Academic Press, 1999.

2. P. M. Pardalos, S. Rajasekaran, and J. Rolim, *Randomization Methods in Algorithm Design*, DIMACS Series in Discrete Mathematics and Theoretical Computer Science 43, 1999.

3. S. Rajasekaran, P.M. Pardalos, and F. Hsu, *Mobile Networks and Computing*, DIMACS Series in Discrete Mathematics and Theoretical Computer Science 52, AMS Press, 2000.

4. S. Rajasekaran, P. M. Pardalos, J. H. Reif, and J. Rolim, *Handbook of Randomized Computing* (Two volumes), Kluwer Academic Press, 2001.

5. S. Rajasekaran and J.H. Reif, *Handbook of Parallel Computing: Models, Applications and Algorithms*, CRC Press, 2008.

6. S. Rajasekaran, L. Fiondella, M. Ahmed, and R.A. Ammar, *Multicore Computing: Algorithms, Architecture, and Applications*, Chapman & Hall/CRC, 2014.

Edited Proceedings and Special Issues

1. S. Rajasekaran, S. Aluru, and D.A. Bader, HiCOMB Introduction and Committees, *IPDPS Workshops*, 2015:329-330.

2. J. Huan, S. Miyano, A. Shehu, X.T. Hu, B. Ma, S. Rajasekaran, V.K. Gombar, M.-P. Schapranow, I. Yoo, J. Zhou, B. Chen, V. Pai, B.G. Pierce, *2015 IEEE International Conference on Bioinformatics and Biomedicine,* BIBM 2015, Washington, D.C., USA, November 9-12, 2015, IEEE Computer Society 2015, ISBN 978-1-4673-6799-8.

3. J. Chen, Y. Khudyakov, V. Honavar, I. Mandoiu, S. Rajasekaran, and A. Zelikovsky, editors, Selected articles from the Fourth IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS 2014): *BMC Bioinformatics*, Volume 16, Supplement 17, 7 December 2015.

4. J. Chen, Y. Khudyakov, V. Honavar, I. Mandoiu, S. Rajasekaran, and A. Zelikovsky, editors, Selected articles from the Fourth IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS 2014): *BMC Genomics*, Volume 16, Supplement 11, 10 November 2015.

5. S.S. Iyengar, Y. Pan, S. Rajasekaran, J.H. Reif, and A. Zelikovsky, editors, *Proc. 5th IEEE International Conference on Computational Advances in Bio and medical Sciences* (ICCABS), Miami, FL, October 15-17, 2015, http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=7332128.

6. I. Mandoiu, M. Pop, S. Rajasekaran, and J.L. Spouge, editors, International Journal of Bioinformatics Research and Applications, Special Issue on Computational Advances in Biology and Medicine, Volume 10, No. 4/5, 2014.

7. Susana Sargento, Sanguthevar Rajasekaran, and Mario Dantas, editors, Proc. IEEE International Conference on Computers and Communication (ISCC), June 23-26, 2014, Madeira, Portugal.

8. S.S. Iyengar, Sanguthevar Rajasekaran, Sartaj Sahni, Jake Chen, Vasant Honavar, editors, Proc. 4th IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), 2014.

9. Vladmir Filkov, Ananth Kalyanaraman, Yury Khudyakov, Ion Mandoiu, Sanguthevar Rajasekaran, Knut Reinert and Alex Zelikovsky, editors, Selected articles from the Third IEEE International Conference on Computational Advances in Bio and Medical Sciences: BMC Bioinformatics, Volume 15, Supplement 8, 14 July 2014.

10. Vladmir Filkov, Ananth Kalyanaraman, Yury Khudyakov, Ion Mandoiu, Sanguthevar Rajasekaran, Knut Reinert and Alex Zelikovsky, editors, Selected articles from the Third IEEE International Conference on Computational Advances in Bio and Medical Sciences: BMC Genomics, Volume 15, Supplement 5, 14 July 2014.

11. S. Aluru, V. Filkov, S. Rajasekaran, and K. Reinert, editors, Special Issue of BMC Bioinformatics, 2013.

12. S. Aluru, V. Filkov, S. Rajasekaran, and K. Reinert, editors, Special Issue of BMC Genomics, 2013.

13. S. Aluru, V. Filkov, S. Rajasekaran, and K. Reinert, editors, Proc. IEEE 3rd International Conference on Computational Advances in Bio and Medical Sciences, ICCABS 2013, New Orleans Airport, LA, June 12-14, 2013, IEEE.

14. S. Rajasekaran and M. Wozniak, Special section on invited papers from NetCoM-2009, *Future Generation Comp. Syst.* 29(1): 241, 2013.

15. I. Mandoiu, M. Pop, S. Rajasekaran and J.L. Spouge, Selected articles from the Second IEEE International Conference on Computational Advances in Bio and Medical Sciences: BMC Genomics, Volume 14, Supplement 7, 5 November 2013.

16. I. Mandoiu, M. Pop, S. Rajasekaran and J.L. Spouge, Selected articles from the Second IEEE International Conference on Computational Advances in Bio and Medical Sciences: BMC Bioinformatics, Volume 14, Supplement 18, 5 November 2013.

17. N. Meghanathan, D. Nagamalai, and S. Rajasekaran, editors, Networks and Communications (NetCom2013): Proceedings of the Fifth International Conference on Networks & Communications (Lecture Notes in Electrical Engineering Book 284).

18. S. Istrail, I.I. Mandoiu, M. Pop, S. Rajasekaran, and J.L. Spouge, editors, Proc. IEEE 2nd International Conference on Computational Advances in Bio and Medical Sciences, ICCABS 2012, Las Vegas, NV, USA, February 23-25, 2012, IEEE.

19. I.I. Mandoiu, T.M. Przytycka, and S. Rajasekaran, editors, Special Issue of BMC Bioinformatics, 2012, Volume 13, Supplement 5, 12 April 2012.

20. I.I. Mandoiu, T.M. Przytycka, and S. Rajasekaran, editors, Special Issue of BMC Genomics, 2012, Volume 13, Supplement 2, 12 April 2012.

21. I.I. Mandoiu, S. Miyano, T. Przytycka, S. Rajasekaran (Eds.), Proceedings of the 1st IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), IEEE, 2011.

22. M. Borodovsky, T.M. Przytycka, S. Rajasekaran, A. Zelikovsky: Special Section on Bioinformatics Research and Applications. IEEE/ACM Trans. Comput. Biology Bioinform. 8(4): 865-866 (2011).

23. M. Borodovsky, J.P. Gogarten, T.M. Przytycka, and S. Rajasekaran, *Bioinformatics Research and Applications, Proc. 6th International Symposium, ISBRA* 2010, LNBI 6053.

24. S. Rajasekaran, *Proc. 1st International Conference on Bioinformatics and Computational Biology (BICoB)*, 2009, LNBI 5462.

25. S. Rajasekaran, *Journal of Parallel and Distributed Computing Special Issue on Parallel Techniques for Information Extraction*, 68(1), 2008.

26. S. Rajasekaran, editor, Proceedings of the Third IASTED International Conference on Communication, Network, and Information Security, October 9-11, 2006, Cambridge, MA, USA IASTED/ACTA Press, 2006.

27. C.-H. Huang and S. Rajasekaran, *Special Issue of Journal of Clinical Monitoring and Computing (JCMC) on High Performance Parallel Bio-computing*, 2005.

28. C.-H. Huang and S. Rajasekaran, *Parallel Computing Special Issue on High Performance Parallel Bio-Computing*, 30(9-10), 2004.

29. S. Rajasekaran and S. Sahni, *International Journal of Foundations of Computer Science Special Issue on Randomized Computing*, March 1999.

Book Chapters

1. S. Rajasekaran, V. Kundeti, and M. Schiller, Algorithms for Local Structural Alignment and Structural Motif Identification, in *Algorithms in Computational Molecular Biology: Techniques, Approaches, and Applications*, John Wiley, 2011.

2. J. Davila and S. Rajasekaran, Randomized Packet Routing, Selection and Sorting on the POPS Network, in *Handbook of Parallel Computing: Models, Algorithms, and Applications*, CRC Press, 2008, pp. 13.1-13.14.

3. S. Rajasekaran, Deterministic and Randomized Sorting Algorithms for Parallel Disk Models, in *Handbook of Parallel Computing: Models, Algorithms, and Applications*, CRC Press, 2008, pp. 6.1-6.18.

4. S. Balla, S. Rajasekaran, and J. Davila, Sorting and FFT Based Techniques in the Discovery of Biopatterns, in *Bioinformatics Algorithms: Techniques and Applications*, Wiley Book Series on Bioinformatics (Series Editors: Yi Pan and Albert Y. Zomaya), 2008, pp. 93-115.

5. R. Ammar, S. Demurjian, I. Greenshields, K. Pattipati, and S. Rajasekaran, Analysis of Heterogeneous Data in Ultrahigh Dimensions, to appear in *Emergent Information Technologies and Enabling Policies for Counter Terrorism*, Editors: R. Popp and J. Yen, IEEE Press, 2006.

6. S. Rajasekaran, Motif Search Algorithms, *Handbook of Computational Molecular Biology*, Editor: S. Aluru, CRC Press, 2006, 37-1–37-21.

7. S. Rajasekaran, J. Davila, and S. Balla, Approximation Algorithms for the Primer Selection, Planted Motif Search, and Related Problems, *Handbook of Approximation Algorithms*, CRC Press, 2007, pp. 75-1–75-25.

8. S. Rajasekaran, An Overview of Simulated Annealing, in *Encyclopedia of Optimization*, edited by P.M. Pardalos, Oxford University Press, 2001.

9. S. Rajasekaran, Sorting and Selection Algorithms for Parallel Disks, in *Handbook of Massive Data Sets*, Kluwer Academic Press, 2001.

10. S. Rajasekaran and D. Krizanc, Random Sampling: Sorting and Selection, in *Handbook of Randomized Computing*, edited by S. Rajasekaran et al., Kluwer Academic Press, 2001.

11. X. Liu, P.M. Pardalos, S. Rajasekaran, and M.G.C. Resende, A GRASP for Frequency Assignment in Mobile Radio Networks, in *Mobile Networks and Computing*, edited by S. Rajasekaran, P. M. Pardalos, and F. Hsu, AMS Press, 2000.

12. S. Rajasekaran, K. Naik, and D. Wei, Frequency Assignment Algorithms for Mobile Computing, in *Mobile Networks and Computing*, edited by S. Rajasekaran, P. M. Pardalos, and F. Hsu, AMS Press, 2000.

13. S. Rajasekaran, Computing on Optical Models, in *Randomization Methods in Algorithm Design*, edited by P.M. Pardalos, S. Rajasekaran, and J. Rolim, AMS Press, 1999, pp. 239-249.

14. S. Rajasekaran and S. Sahni, Fundamental Algorithms for the Array with Reconfigurable Optical Buses, in *Parallel Computation Using Optical Interconnections*, edited by K. Li, Y. Pan, and S. Q. Zheng, Kluwer Academic Publishers, 1998, pp. 185-204.

15. S. Rajasekaran, Randomized Parallel Computing, in *Encyclopedia of Computer Science and Technology*, Volume 40, edited by A. Kent and J. G. Williams, Marcel Dekker Inc., 1999, pp. 265-282.

16. S. Rajasekaran, Randomized Parallel Computing in *Encyclopedia of Microcomputers*, edited by A. Kent and J. G. Williams, Marcel Dekker Inc., 1998.

17. S. Rajasekaran, Basic algorithms on parallel optical models of computing, in *Parallel Processing of Discrete Problems*, edited by P.M. Pardalos, Springer-Verlag New York, Inc., 1999, pp. 181-195.

18. S. Rajasekaran and P.M. Pardalos, Data Structures and Algorithms, in *Encyclopedia of Electrical and Electronic Engineering*, edited by J. G. Webster, John Wiley and Sons, Inc., 1998.

19. S. Rajasekaran and J. Rolim, Randomized Parallel Algorithms for Combinatorial Optimization, in *Handbook of Combinatorial Optimization*, Volume 3, edited by D.-Z. Du and P. M. Pardalos, Kluwer Academic Publishers, 1998.

20. S. Rajasekaran, Sorting and Selection on Interconnection Networks, *DIMACS Series in Discrete Mathematics and Theoretical Computer Science 21*, 1995, pp. 275-296.

21. S. Rajasekaran and J.H. Reif, Derivation of Randomized Algorithms for Sorting and Selection, in *Parallel Algorithm Derivation And Program Transformation*, edited by R. Paige, J.H. Reif, and R. Wachter, Kluwer Academic Publishers, 1993, pp.187-205.

22. S. Rajasekaran and S. Sen, Random Sampling Techniques and Parallel Algorithms Design, in *Synthesis of Parallel Algorithms*, edited by J.H. Reif, Morgan-Kaufmann Publishers, San Mateo, California, pp. 411-451, 1993.

23. S. Rajasekaran, Randomised Algorithms for Packet Routing on the Mesh, in *Advances in Parallel Algorithms* edited by L. Kronsjo and D. Shumsheruddin, Blackwell Scientific Publications, pp. 277-301, 1992.

Refereed Publications – Journals

1. S. Saha and S. Rajasekaran, NRGC: a novel referential genome compression algorithm, *Bioinformatics*, to appear, 2016.

2. A.-A. Mamun, S. Pal, and S. Rajasekaran, KCMBT: a k-mer Counter based on Multiple Burst Trees, *Bioinformatics*, June 9, 2016, DOI: 10.1093/bioinformatics/btw345.

3. Abdullah-Al Mamun, Robert Aseltine, and Sanguthevar Rajasekaran, Efficient Record Linkage Algorithms Using Complete Linkage Clustering, *PLoS ONE* 11(4):e0154446, April 28, 2016, doi:10.1371/journal.pone.0154446.

4. S. Sharma, M. Hedden, O. Toledo, K. F. Lyon, S. Brooks, R. P. David, J. Limtong, J. Newsome, S. Rajasekaran, V. Thapar, E. Williams, and M. R. Schiller, The functional human C-terminome, PLOS ONE 2016, Apr 6;11(4):e0152731. doi: 10.1371/journal.pone.0152731.

5. Marius Nicolae and Sanguthevar Rajasekaran, On pattern matching with k mismatches and few don't cares, *submitted to Information Processing Letters*, April 2016.

6. M. Nicolae, and S. Rajasekaran, LFQC: A lossless compression algorithm for FASTQ files, *Bioinformatics* (2015) doi: 10.1093/bioinformatics/btv384, June 20, 2015.

7. S. Saha and S. Rajasekaran, ERGC: An efficient referential genome compression algorithm, *Bioinformatics* (2015) doi: 10.1093/bioinformatics/btv399 , July 2, 2015.

8. S. Saha and S. Rajasekaran, EC: an efficient error correction algorithm for short reads, *BMC Bioinformatics*, 16 (Suppl 17):S2, 7 December 2015.

9. K. Lyon, C.L. Strong, S. Schooler, R. Young, N. Roy, B. Ozar, M. Bachmeier, S. Rajasekaran, and M.R. Schiller, Natural variability of minimotifs in 1,092 people indicates that minimotifs are targets of evolution, *Nucleic Acids Research*, pii, gkv580, 2015.

10. M. A. Hamdalla, R.A. Ammar, and S. Rajasekaran, A molecular structure matching approach to efficient identification of endogenous mammalian biochemical structures, *BMC Bioinformatics*, 16(Suppl 5):S11, doi:10.1186/1471-2105-16-S5-S11.

11. S. Saha, S. Rajasekaran, and R. Ramprasad, Novel randomized feature selection algorithms, *International Journal of Foundations of Computer Science*, 26(3): 321-342, 2015.

12. M. Nicolae and S. Rajasekaran, On String Matching with Mismatches, *Algorithms*, 2015, 2, 248-270, doi:10.3390/a8020248.

13. M. Al-Bzoor, Y. Zhu, J. Liu, R.A. Ammar, J.-H. Cui, and S. Rajasekaran, An adaptive power controlled routing protocol for underwater sensor network, *International Journal of Sensor Networks*, 18(3/4):238-249, 2015.

14. S. Rajasekaran and M. Nicolae, An error correcting parser for context free grammars that takes less than cubic time, CoRR abs/1406.3405, 2014.

15. S. Rajasekaran and S. Pathak, Efficient Algorithms for the Closest Pair Problem and Applications, CoRR abs/1407.5609, 2014.

16. S. Rajasekaran and M. Nicolae, An Elegant Algorithm for the Construction of Suffix Arrays, *Journal of Discrete Algorithms* 27, July 2014, pp. 21-28; DOI: 10.1016/j.jda.2014.03.001.

17. S. Saha and S. Rajasekaran, Efficient and scalable scaffolding using optical restriction maps, *BMC Genomics* 2014, 15(Suppl 5):S5; doi:10.1186/1471-2164-15-S5-S5.

18. D. Sharma, S. Rajasekaran, and S. Pathak, An Experimental Comparison of PMSprune and Other Algorithms for Motif Search, *International Journal of Bioinformatics Research and Applications (IJBRA)*, 10(6), 2014, pp. 559-573.

19. M. Nicolae and S. Rajasekaran, qPMS9: An Efficient Algorithm for Quorum Planted Motif Search, *Scientific Reports* 5, Article Number 7813, January 2015, doi:10.1038/srep07813.

20. M. Hamdalla, S. Rajasekaran, D.F. Grant, and I.I. Mandoiu, Metabolic Pathway Predictions for Metabolomics: A Molecular Structure Matching Approach, *Journal of Chemical Information and Modeling* 55(3), 2015, pp. 709-718.

21. K.M. Konwar, S. Rajasekaran, and A.A. Shvartsman, Robust network supercomputing with unreliable workers, *Journal of Parallel and Distributed Computing* 75, 2015, pp. 81-92.

22. V. Kundeti, S. Rajasekaran, and H. Dinh, Border Length Minimization Problem on a Square Array, *Journal of Computational Biology* 21(6), 2014, pp. 446-455.

23. A. Al Mamun, R. Aseltine, and S. Rajasekaran, RLT-S: A Web System for Record Linkage, *PLOS ONE* 10(5): e0124449. doi:10.1371/journal.pone.012444.

24. S. Saha and S. Rajasekaran, A Unified Bug Testing Software for Biological and Other Systems, *Journal of Applied Bioinformatics & Computational Biology* 3:1, 2014, doi: 10.4172/2329-9533.1000105.

25. S. Bandyopadhyay, S. Sahni, and S. Rajasekaran, PMS6: a fast algorithm for motif discovery, *International Journal of Bioinformatics Research and Applications (IJBRA)* 10(4):369-383, 2014, doi: 10.1504/IJBRA.2014.062990.

26. M. Nicolae and S. Rajasekaran, Efficient Sequential and Parallel Algorithms for Planted Motif Search, **Highly Accessed**, *BMC Bioinformatics* 15: 34, 2014.

27. A.A. Mamun, T. Mi, R. Aseltine, and S. Rajasekaran, Efficient sequential and parallel algorithms for record linkage, *Journal of the American Medical Informatics Association (JAMIA)*, 2013, doi:10.1136/amiajnl-2013-002034.

28. S. Bandyopadhyay, S. Sahni, and S. Rajasekaran, PMS6MC: A Multicore Algorithm for Motif Discovery, *Algorithms* 6(4): 805-823, 2013.

29. T. Mi and S. Rajasekaran, Efficient algorithms for biological stems search, *BMC Bioinformatics* 14: 161, 2013.

30. S. Ibrahim, M. Al-Bzoor, J. Liu, R.A. Ammar, S. Rajasekaran, and J.-H. Cui, General optimization framework for surface gateway deployment problem in underwater sensor networks, *EURASIP J. Wireless Comm. and Networking*, 128, 2013.

31. S. Saha, S. Rajasekaran, J. Bi, and S. Pathak, Efficient techniques for genotype-phenotype correlational analysis, *BMC Medical Informatics and Decision Making* 2013, 13:41, doi:10.1186/1472-6947-13-41.

32. S. Pathak, S. Rajasekaran, and M. Nicolae, EMS1: An elegant algorithm for edit distance based motif search, *International Journal of Foundations of Computer Science*, 24(4), 2013, 473-486.

33. T. Mi and S. Rajasekaran, Efficient algorithms for biological stems search, *BMC Bioinformatics* 14: 161, 2013.

34. S. Saha, S. Rajasekaran, J. Bi, and S. Pathak, Efficient Techniques for Genotype-Phenotype Correlational Analysis, *BMC Medical Informatics and Decision Making*, 2013, 13:41, doi:10.1186/1472-6947-13-41.

35. L. Fiondella, S. Rajasekaran, and S.S. Gokhale, Efficient software reliability analysis with correlated component failures, *IEEE Transactions on Reliability* 62(1), 2013, pp. 244-255.

36. M.A. Hamdalla, I.I. Mandoiu, D.W. Hill, S. Rajasekaran, and D.F. Grant, BioSM: Metabolomics tool for identifying edogenous mammalian biochemical structures in chemical structure, *Journal of Chemical Information and Modeling*, January 20, 2013, DOI: 10.1021/ci300512q.

37. T. Mi, S. Rajasekaran, and R. Aseltine, Efficient algorithms for fast integration on large data sets from multiple sources, *BMC Medical Informatics and Decision Making* 2012, 12:59.

38. S. Rajasekaran, L. Fiondella, D. Sharma, R.A. Ammar, and N. Lownes, Communication and energy efficient routing protocols for single-hop radio networks, *Journal of Parallel and Distributed Computing* 72(6): 819-826, 2012.

39. H. Dinh, S. Rajasekaran, and J. Davila, qPMS7: A fast algorithm for finding (l, d)-motifs in DNA and protein sequences, *PLoS ONE*, 2012, doi:10.1371/journal.pone.0041425.

40. V. Kundeti and S. Rajasekaran, Self assembly of rectangular shapes on concentration programming and probabilistic tile assembly models, *Natural Computing* 11(2), 2012, 199-207, DOI: 10.1007/s11047-012-9313-1.

41. V. Kundeti, S. Rajasekaran, and H. Dinh, An efficient algorithm for Chinese postman walk on bi-directed de Bruijn graphs, *Discrete Mathematics, Algorithms and Applications*, 4(2), 2012.

42. T. Mi, S. Rajasekaran, J.C. Merlin, M. Gryk, and M.R. Schiller, Achieving high accuracy prediction of mini motifs, *PLoS ONE*, 2012, doi:10.1371/journal.pone.0045589.

43. J.C. Merlin, S. Rajasekaran, T, Mi, M.R. Schiller, Reducing False-Positive Prediction of Minimotifs with a Genetic Interaction Filter, *PLoS ONE* 7(3): e32630. doi:10.1371/journal.pone.0032630, 2012.

44. D.P. Sargeant, M.R. Gryk, M.W. Maciejewski, V. Thapar, V. Kundeti, S. Rajasekaran, P. Romero, K. Dunker, S.-C. Li, T. Kaneko, and M.R. Schiller, Secondary Structure, a Missing Component of Sequence-Based Minimotif Definitions, *PLoS ONE*, 2012, doi:10.1371/journal.pone.0049957.

45. T. Mi, J.C. Merlin, S. Deverasetty, M.R. Gryk, T.J. Bill, A.W. Brooks, L.Y. Lee, V. Rathnayake, C.A. Ross, D.P. Sargeant, C.L. Strong, P. Watts, S. Rajasekaran, and M.R. Schiller, Minimotif Miner 3.0: database expansion and significantly improved reduction of false-positive predictions from consensus sequences, *Nucleic Acids Research*, 2012, Vol. 40, Database issue, 6 December 2011, doi:10.1093/nar/gkr1189.

46. H. Dinh and S. Rajasekaran, and V. Kundeti, PMS5: an efficient exact algorithm for the (l, d)-motif finding problem, *BMC Bioinformatics* 12: 410, 2011.

47. H. Dinh and S. Rajasekaran, A memory-efficient data structure representing exact-match overlap graphs with application for next-generation DNA assembly, *Bioinformatics* 27(14), 2011, pp. 1901-1907.

48. S. Rajasekaran, V. Kundeti, R. Birge, V. Kumar, and S. Sahni, Efficient algorithms for computing with protein-based volumetric memory processors, *IEEE Transactions on Nanotechnology*, 10(4), July 2011, pp. 881-890.

49. S. Rajasekaran and H. Dinh, A speedup technique for (l, d)-motif finding algorithms, *BMC Research Notes* 2011, 4:54 (8 March 2011).

50. V. Kundeti and S. Rajasekaran, Efficient out-of-core sorting algorithms for the Parallel Disks Model, *Journal of Parallel and Distributed Computing* 71(11): 1427-1433 (2011).

51. S. Rajasekaran, J.C. Merlin, V. Kundeti, T. Mi, , A. Oommen, J. Vyas, I. Alaniz,K. Chung, F. Chowdhury, S. Deverasatty, T.M. Irvey, D. Lacadmbacal, D. Lara, S. Panchangam, V. Rathnayake, P. Watts and M.R. Schiller, A Computational Tool for Identifying Minimotifs in Protein-Protein Interactions and Improving the Accuracy of Minimotif Predictions, *Proteins: Structure, Function, and Bioinformatics*, Vol. 70, No. 1, pp. 153-164, October 2010.

52. V. Kundeti and S. Rajasekaran, Efficient Algorithms for Self Assembling Non-Rectangular Nano Structures, *Natural Computing*, Vol. 10, No. 1, pp. 583-594, April 2011.

53. V. Kundeti and S. Rajasekaran, Fast algorithms for placing large entries along the diagonal of a sparse matrix, *Journal of Comptational and Applied Mathematics*, Vol. 235, No. 3, pp. 756-764, December 2010.

54. V. Kundeti and S. Rajasekaran, On the Hardness of the Border Length Minimzation Problem on a Rectangular Array, *International Journal of Foundations of Computer Science*, Vol. 21, No. 6, pp. 1089-1100, December 2010.

55. V. Kundeti, S. Rajasekaran, H. Dinh, M. Vaughn, and V. Thapar, Efficient Parallel and Out of Core Algorithms for Constructing Large Bi-directed de Bruijn Graphs, *BMC Bioinformatics*, **Highly Accessed**, Vol. 11, No. 1, pp. 560-588, November 2010.

56. D. Trinca and S. Rajasekaran, Specialized Compression for Coping with Diffraction Effects in Protein-based Volumetric Memories: Solving Some Challenging Instances, *Journal of Nanoelectronics and Optoelectronics* (JNO), Vol. 5, No. 3, pp. 290-294, 2010.

57. M. Song and S. Rajasekaran, Fast Algorithms for Constant Approximation k-Means Clustering, *Transactions on Machine Learning and Data Mining*, Vol. 3, No. 2, pp. 67-79, December 2010.

58. S. Rajasekaran, T. Mi, A. Oommen, J.C. Merlin, P. Gradie, and M.R. Schiller, Partitioning of Minimotifs Based on Function with Improved Prediction Accuracy, *PLoS ONE* 5(8): e12276, 2010.

59. S. Rajasekaran, S. Al Seesi, R.A. Ammar, Improved Algorithms for Parsing ESLTAGs: A Grammatical Model Suitable for RNA Pseudoknots, *IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB)*, 7(4), 2010, pp. 619-27.

60. M. J. Ranaghan, S. Shima, L. Ramos, D. S. Poulin, G. Whited, S. Rajasekaran, J. A. Stuart, A. D. Albert, and R. R. Birge, Photochemical and Thermal Stability of Green and Blue Proteorhodopsins: Implications for Protein-Based Bioelectronic Devices, *Journal of Physical Chemistry B*, Vol. 114, pp. 14064-14070, 2010.

61. M. Song and S. Rajasekaran, A greedy algorithm for gene selection based on SVM and correlation, *International Journal of Bioinformatics Research and Applications* 6(3), 2010, pp. 296-307.

62. J. Vyas, R.J. Nowling, T. Meusburger, D. Sargeant, K. Kadaveru, M.R. Gryk, V. Kundeti, S. Rajasekaran, and M.R. Schiller, MimoSA: a system for minimotif annotation, *BMC Bioinformatics*, 2010, 11: 328.

63. D. Trinca and S. Rajasekaran, Fast Local-search-based Parallel Algorithms for DNA Probe Placement on Oligonucleotide Arrays, *Advanced Modeling and Optimization* 12(1), 2010, pp. 45-55.

64. S. Rajasekaran and V. Kundeti, Spectrum Based Techniques for Graph Isomorphism, *International Journal of Foundations for Computer Science* 20(3), 2009, pp. 479-499.

65. J. Vyas, R.J. Nowling, M.W. Maciejewski, S. Rajasekaran, M.R. Gryk, and M.R. Schiller, A proposed syntax for Minimotif Semantics, version I, *BMC Genomics*, 2009, 10:360.

66. S. Rajasekaran, Computational Techniques for Motif Search, *Frontiers in Bioscience* 14, June 1, 2009, pp. 5052-5065.

67. S. Rajasekaran, S. Balla, P. Gradie, M.R. Gryk, K. Kadaveru, V. Kundeti, M.W. Maciejewski, T. Mi, N. Rubino, J. Vyas, and M.R. Schiller, Minimotif miner 2nd release: a database and web system for motif search, *Nucleic Acids Research* 37, 2009, D185-D190.

68. S. Rajasekaran and S. Sen, Optimal and practical randomized algorithms for sorting on the PDM, *IEEE Transactions on Computers* 57(4), 2008, pp. 547-561.

69. S. Rajasekaran, M. Song, A relaxation scheme for increasing the parallelism in Jacobi-SVD, *Journal of Parallel Distributed Computing* 68(6), 2008, pp. 769-777.

70. S. Balla, S. Rajasekaran, and I. Mandoiu, Efficient Algorithms for Degenerate Primer Search, *International Journal of Foundations of Computer Science* 18, 2007, pp. 899-910.

71. S. Balla and S. Rajasekaran, An Efficient Algorithm for Minimum Degeneracy Primer Selection, *IEEE Transactions on Nanobioscience* 6(1), 2007, pp. 12-17.

72. J. Davila, S. Balla, and S. Rajasekaran, Fast and Practical Algorithms for Planted (l, d) Motif Search, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2007, pp. 544-552.

73. S. Rajasekaran, R. Ammar, and D.-G. Shin, Efficient Parallel Algorithms for Processing Biological Sequences, *International Journal of Computer Applications in Technology (IJCAT)* 26(3), 2006, pp. 119-125.

74. J. Luo and S. Rajasekaran, A Framework for Mining Association Rules, *International Journal of Computers and Their Applications*, March 2006, pp. 39-49.

75. R.D. Trumbower, S. Rajasekaran, and P. Faghri, Identifying Offline Muscle Strength Profiles Sufficient for Short-Duration FES-LCE Exercise: A PAC Learning Model Approach, *Journal of Clinical Monitoring and Computing* 20, 2006, pp. 209-220.

76. A. A. Mohamed and S. Rajasekaran, Efficient Randomized Algorithms for Text Summarization, *Advances in Natural Language Processing, Journal of Research in Computing Science*, 2006, pp. 195-200.

77. M. Song and S. Rajasekaran, A Transaction Mapping Algorithm for Frequent Itemsets Mining, *IEEE Transactions on Knowledge and Data Engineering (TKDE)* 18(4), 2006, pp. 472-481.

78. S. Balla, V. Thapar, S. Verma, T. Luong, T. Faghri, C-H. Huang, S. Rajasekaran, J.J. del Campo, J.H. Shinn, W.A. Mohler, M.W. Maciejewski, M.R. Gryk, B. Piccirillo, S.R. Schiller, and M.R. Schiller, Minimotif Miner, a tool for investigating protein function, *Nature Methods* 3, 2006, pp.175-177.

79. C.-H. Haung, S. Rajasekaran, L. Yang, and X. He, Finding Hamiltonian Paths in Tournaments on Clusters, *Journal of Cluster Computing* 9(3), 2006, pp. 345-353.

80. S. Rajasekaran and S. Sen, A generalization of the 0-1 principle for sorting, *Information Processing Letters* 94(1), 2005, pp. 43-47.

81. S. Rajasekaran, S. Balla, and C.-H. Huang, Exact algorithms for planted motif challenge problems, *Journal of Computational Biology* 12(8), 2005, pp. 1117-1128.

82. S. Rajasekaran and J. Davila, Packet routing and selection on the POPS network, *Journal of Parallel and Distributed Computing* 65(8), 2005, pp. 927-933.

83. S. Rajasekaran, V. Thapar, H. Dave, and C.-H. Huang, A Randomized Algorithm for Distance Matrix Calculations in Multiple Sequence Alignment, *Journal of Clinical Monitoring and Computing (JCMC)* 19, 2005, pp. 351-359.

84. S. Rajasekaran, S. Balla, C.-H. Huang, V. Thapar, Mike Gryk, Mark Maciejewski, and Marty Schiller, Exact algorithms for motif search, *Journal of Clinical Monitoring and Computing (JCMC)* 19, 2005, pp. 319-328.

85. C.-H. Huang, V. Lanza, S. Rajasekaran, and W. Dubitzky, Healthgrid – Bridging Life Science and Information Technology, *Journal of Clinical Monitoring and Computing* 19, 2005, pp. 259-262.

86. S. Rajasekaran, Efficient parallel hierarchical clustering algorithms, *IEEE Transactions on Parallel and Distributed Systems*, 16(6), June 2005, pp. 497-502.

87. S. Rajasekaran, R. Ammar, B. Cheriyan, and L. Loew, Parallel Techniques for the Virtual Cell, *Computing Letters* 1(2), 2005, pp. 69-74.

88. J. Luo and S. Rajasekaran, FIT: A Fast Algorithm for Discovering Frequent Itemsets in Large Databases, *Computing Letters* 1(3), 2005, pp. 129-136.

89. S. Rajasekaran, R. Ammar, K. Reifsnider, L. Achenie, A. Mohamed, G. Zhang, and M. Ahmed, Efficient parallel simulation of direct methanol fuel cell models, to appear in *Journal of Fuel Cell Science and Technology* 2(2), 2005, pp. 141-144.

90. J. Davila and S. Rajasekaran, Randomized sorting on the POPS network, *International Journal of Foundations of Computer Science* 16(1), 2005, pp. 105-116.

91. S. Rajasekaran, On the Euclidean minimum spanning tree problem, *Computing Letters* 1(1), 2005, pp. 11-14.

92. Chun-Hsi Huang, Sanguthevar Rajasekaran, High-Performance Parallel Bio-Computing, *Parallel Computing*, 30(9-10), 2004, pp. 999-1000.

93. J. Luo and S. Rajasekaran, Parallizing 1-dimensional estuarine model, *International Journal of Foundations of Computer Science* 15(6), 2004, pp. 809-821.

94. S. Rajasekaran, Out-of-core computing on mesh-connected computers, *Journal of Parallel and Distributed Computing* 64(11), 2004, pp. 1311-1317.

95. C.W. Lee, C.-H. Huang, L. Yang and S. Rajasekaran, Distributed Path-Based Inference in Semantic Networks, *Journal of Supercomputing* 29(2), 2004, pp. 211-227.

96. L. Fu and S. Rajasekaran, Evaluating holistic aggregators efficiently for very large datasets, *Journal of Very Large Data Bases (VLDB)*, 13(2), 2004, pp. 148-161.

97. D.S.L. Wei, S. Rajasekaran, K. Naik, and S-Y. Kuo, Efficient Algorithms for Selection and Sorting of Large Distributed Files on de Bruijn and Hypercube Structures, *International Journal of Foundations of Computer Science* 14(6), 2003, pp. 1129-1146.

98. D.S.L. Wei, S. Rajasekaran, Z. Cheng, K. Naik, and S-Y. Kuo, Efficient Selection and Sorting Schemes Using Corteries for Processing Large Distributed Files, *Journal of Parallel and Distributed Computing* 62(8), 2002, pp. 1295-1313.

99. H. ElGindy and S. Rajasekaran, Sorting and Selection Algorithms on a Linear Array with Optical Bus System, *Parallel Processing Letters* 9(3), 1999, pp. 373-383.

100. S. Rajasekaran and S. Ramaswami, Optimal Parallel Randomized Algorithms for the Voronoi Diagram of Line Segments in the Plane and Related Problems, *Algorithmica* 33(4), 2002, pp. 436–460.

101. S. Rajasekaran, On Simulated Annealing and Nested Annealing, *Journal of Global Optimization* 16(1), 2000, pp. 43–56.

102. S. Rajasekaran, X. Jin, and J.L. Spouge, The Efficient Computation of Position-Specific Match Scores with the Fast Fourier Transform, *Journal of Computational Biology* 9(1), 2002, pp. 23-34.

103. C.-H. Huang and S. Rajasekaran, Parallel pattern identification in biological sequences on clusters, *IEEE Transactions on Nanobioscience* 2(1), 2003, pp. 29-34.

104. S. Rajasekaran, Efficient Parallel Algorithms for Template Matching, *Parallel Processing Letters*, 12(3 & 4), 2002, pp. 359–364.

105. S. Rajasekaran, Y. Hu, H. Nick, P.M. Pardalos, S. Sahni, G. Shaw, Efficient Algorithms for Similarity Search, *Journal of Combinatorial Optimization*, 5(1), 2001, pp. 125-132.

106. S. Rajasekaran, H. Nick, P.M. Pardalos, S. Sahni, G. Shaw, Efficient Algorithms For Local Alignment Search, *Journal of Combinatorial Optimization*, 5(1), 2001, pp. 117-124.

107. S. Rajasekaran, A Framework for Simple Sorting Algorithms on Parallel Disk Systems, *Theory of Computing Systems*, 34(2), 2001, pp. 101-114.

108. J.C. Cogolludo and S. Rajasekaran, Permutation Routing on Reconfigurable Meshes, *Algorithmica*, 31(1), 2001, pp. 44-57.

109. S. Rajasekaran, Selection Algorithms for Parallel Disk Systems, *Journal of Parallel and Distributed Computing*, 61(4), 2001, pp. 536-544.

110. S. Rajasekaran, An Optimal Parallel Algorithm for Sorting Multisets, *Information Processing Letters*, 67(3), 1998, pp. 141-143.

111. S. Rajasekaran and I. Lee, Parallel Algorithms for Relational Coarsest Partition Problems, *IEEE Transactions on Parallel and Distributed Systems*, 9(7), 1998, pp. 687-699.

112. S. Rajasekaran and S. Sahni, Randomized Routing, Selection, and Sorting on the OTIS-Mesh, *IEEE Transactions on Parallel and Distributed Systems*, 9(9), September 1998, pp. 833-840.

113. S. Rajasekaran, Selection on Mesh Connected Computers with Fixed and Reconfigurable Buses, *Journal of Algorithms*, 29, 1998, pp. 68-81.

114. S. Rajasekaran and S. Sahni, Deterministic Routing on the Array with Reconfigurable Optical Buses, *Parallel Processing Letters* 7(3), 1997, pp. 219-224.

115. S. Rajasekaran and T. McKendall, Permutation Routing and Sorting on the Reconfigurable Mesh, *International Journal of Foundations of Computer Science* 9(2), 1998, pp. 199-211.

116. S. Rajasekaran and S. Yooseph, TAL Parsing in $O(M(n^2))$ Time, *Journal of Computer and System Sciences* 56(1), 1998, pp. 83-89.

117. S. Rajasekaran and S. Sahni, Sorting, Selection, and Routing on the Array with Reconfigurable Optical Buses, *IEEE Transactions on Parallel and Distributed Systems* 8(11), 1997, pp. 1123-1131.

118. S. Rajasekaran, W. Chen, and S. Yooseph, Unifying Themes for Selection on Any Network, *Journal of Parallel and Distributed Computing* 46(1), 1997, pp. 105-111.

119. S. Rajasekaran, Mesh Connected Computers with Fixed and Reconfigurable Buses: Packet Routing and Sorting, *IEEE Transactions on Computers*, 45(5), 1996, pp.529-539.

120. S. Rajasekaran and S. Sahni, Sorting and Selection on Distributed Memory Bus Computers, *Parallel Algorithms and Applications* 8, 1996, pp. 179-193.

121. S. Rajasekaran, TAL Parsing in $o(n^6)$ Time, *SIAM Journal on Computing*, 25(4), 1996, pp. 862-873.

122. S. Rajasekaran, $k-k$ Routing, $k-k$ Sorting, and Cut Through Routing on the Mesh, *Journal of Algorithms* 19, 1995, pp. 361-382.

123. S. Rajasekaran, Randomized Selection on the Hypercube, *Journal of Parallel and Distributed Computing*, 37(2), 1996, pp. 187-193.

124. S. Rajasekaran and S. Ramaswami, Optimal Mesh Algorithms for the Voronoi Diagram of Line Segments, Visibility Graphs, and Motion Planning in the Plane, *Journal of Parallel and Distributed Computing 26*, 1995, pp. 99-115.

125. M.A. Palis, J.C. Liou, S. Rajasekaran, S. Shende, and D.S.L. Wei, Online Scheduling of Dynamic Trees, *Parallel Processing Letters*, 5(4), 1995, pp. 635-646.

126. S. Rajasekaran and M. Raghavachari, A Randomized Algorithm for Multipacket Routing on the Mesh, *Journal of Parallel and Distributed Computing 26*, 1995, pp. 257-260.

127. S. Rajasekaran and K. Ross, Fast Algorithms for Generating Discrete Random Variates with Changing Distributions, *ACM Transactions on Modeling and Computer Simulation*, Vol. 3, No. 1, January 1993, pp. 1-19.

128. M.A. Palis, S. Rajasekaran, and D.S.L. Wei, Packet Routing and PRAM Emulation on Star Graphs and Leveled Networks, *Journal of Parallel and Distributed Computing 20*, 1994, pp. 145-157.

129. S. Rajasekaran and D.S.L. Wei, Selection, Routing, and Sorting on the Star Graph, *Journal of Parallel and Distributed Computing*, 41(2), 1997, pp. 225-233.

130. R. Paturi, S. Rajasekaran, and J.H. Reif, The Light Bulb Problem, *Information and Computation 117*, 1995, pp. 187-192.

131. D. Krizanc, S. Rajasekaran, and S. Shende, A Comparison of Meshes with Static Buses and Unidirectional Wrap-Arounds, *Parallel Processing Letters*, 3(2), 1993, pp. 109-114.

132. S. Rajasekaran and R. Overholt, Constant Queue Routing on a Mesh, *Journal of Parallel and Distributed Computing* 15, 1992, pp. 160-166.

133. S. Rajasekaran and J.H. Reif, Nested Annealing: A Provable Improvement to Simulated Annealing, *Theoretical Computer Science* 99, 1992, pp. 157-176.

134. S. Rajasekaran and S. Sen, On Parallel Integer Sorting, *Acta Informatica* 29, pp. 1-15, 1992.

135. S. Rajasekaran and T. Tsantilas, Optimal Routing Algorithms for Mesh-Connected Processor Arrays, *Algorithmica* 8, 1992, pp. 21-38.

136. S. Rajasekaran and J.H. Reif, Optimal and Sub-Logarithmic Time Randomized Parallel Sorting Algorithms, *SIAM Journal on Computing*, vol.18, no.3, 1989, pp. 594-607.

Publications – Conference/Workshop

1. S. Rajasekaran and S. Saha, Efficient Algorithms for the Two Locus Association Problem in GWAS and Related Problems, *Proc. 25th ACM International Conference on Information and Knowledge Management* (CIKM 2016), Indianapolis, October 24-28, 2016.

2. S. Rajasekaran and M. Nicolae, An error correcting parser for context-free grammars that takes less than cubic time, *Proc. 10th International Conference on Language and Automata Theory and Applications* (LATA), Prague, Czech Republic, March 14-18, 2016, Springer Lecture Notes in Computer Science.

3. S. Pal, S. Pathak, and S. Rajasekaran, On Speeding-up Parallel Jacobi Iterations for SVDs, *submitted to the 18th IEEE International Conference on High Performance Computing and Communications* (HPCC), 2016.

4. S. Saha and S. Rajasekaran, POMP: A powerful splice mapper for RNA-seq data, *Proc. The 7th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics* (ACM BCB), Seattle, WA, October 2-5, 2016.

5. A.-A. Mamun and S. Rajasekaran, An Efficient Minimum Spanning Tree Algorithm, Proc. IEEE International Symposium on Computers and Communications, ISCC, 2016, June 27-30, Messina, Italy.

6. S. Tolba, R. Ammar, and S. Rajasekaran, Taking Swarms to the Field: Constrained Spiral Flocking for Underwater Search, Proc. IEEE International Symposium on Computers and Communications, ISCC, 2016, June 27-30, Messina, Italy.

7. A. Al-Mamun, S. Pal, and S. Rajasekaran, Efficient techniques for k-mer counting, *Proc. IEEE International Conference on Computational Advances in Bio and medical Sciences* (IC-CABS), October 15-17, Miami, FL, 2015, 1 page.

8. S. Pal and S. Rajasekaran, Improved Algorithms for Finding Edit Distance Based Motifs, *Proc. IEEE International Conference on Bioinformatics and Biomedicine*, November 9-12, 2015, Washington, D.C.

9. S.Tolba, R.A. Ammar, and S. Rajasekaran, Taking Swarms to the Field: A Framework for Underwater Mission Planning, *ISCC* 2015.

10. S. Saha and S. Rajasekaran, REFECT: A novel paradigm for correcting short reads, *Proc. The 6th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics* (ACM-BCB), Sept. 9-12, Atlanta, GA, 2015.

11. S. Saha and S. Rajasekaran, NRRC: A Non-referential Reads Compression Algorithm, *Proc. ISBRA*, 2015, pp. 297-308.

12. Sherif Tolba, Reda Ammar, and Sanguthevar Rajasekaran, Taking Swarms to the Field: A Framework for Underwater Mission Planning, *Proc. ISCC 2015*, Larnaca, Cyprus, July 6-9, pp. 1007-1013.

13. Robert Martin, Yibo Zhu, Lina Pu, Fei Dou, Zheng Peng, Jun-Hong Cui, Sanguthevar Rajasekaran, Aqua-Sim Next Generation: A NS-3 Based Simulator for Underwater Sensor Networks. *Proc. 10th International Conference on Underwater Networks and Systems (WUWNet2015)*, October 22-24, Washington DC, 2015, 18:1-18:2.

14. M. Alharbi and S. Rajasekaran, Conjunctive combined causal rules mining, *Proc. IEEE International Symposium on Signal Processing and Information Technology* (ISSPIT), December 7-10, Abu Dhabi, UAE, 2015.

15. M. Alharbi and S. Rajasekaran, Disjunctive combined causal rules mining, *Proc. IEEE International Symposium on Signal Processing and Information Technology* (ISSPIT), December 7-10, Abu Dhabi, UAE, 2015.

16. A. Algwaiz, S. Rajasekaran, and R.A. Ammar, Predicting E. Coli promoters using formal grammars, *Proc. IEEE International Symposium on Signal Processing and Information Technology* (ISSPIT), December 7-10, Abu Dhabi, UAE, 2015.

17. S. Saha and S. Rajasekaran, Efficient algorithms for the compression of FASTQ files, *Proc. IEEE BIBM*, 2014, pp. 82-85.

18. A. Al Mamun, R. Aseltine, and S. Rajasekaran, Poster: Efficient Record Linkage Techniques, *Proc. ICCABS*, 2014, 1 page.

19. S. Saha and S. Rajasekaran, Efficient algorithms for error correction and compression of NGS data, *Proc. ICCABS* 2014, 1 page.

20. Ayman Alharbi, Hesham Alhumyani, Reda Ammar, Jun-Hong Cui, and Sanguthevar Rajasekaran, Efficient Pipeline Architectures for Underwater Big Data Analytics, *Proc. IEEE ISSPIT* 2014.

21. M. Alharbi, S. Pathak, and S. Rajasekaran, Frequent Itemsets Mining on Weighted Uncertain Data, *IEEE ISSPIT* 2014.

22. A. Ebaid, R. Ammar, and S. Rajasekaran, Energy-Aware Heuristics for Scheduling Parallel Applications on High Performance Computing Platforms, *IEEE ISSPIT* 2014.

23. M. Al-Bzoor, R. Ammar, J-H. Cui, and S. Rajasekaran, Coordinated Multi-Surface Gateway Redeployment for Enhanced Performance in Underwater Sensor Networks, *Proc. International Symposium on Computers and Communications*, 2014.

24. M. Alharbi, P. Periaswamy, and S. Rajasekaran, Disjunctive rules mining from uncertain databases, *Proc. International Symposium on Computers and Communications*, 2014.

25. M. Hamdalla, R. Ammar and S. Rajasekaran, A Molecular Structure Matching Approach to Efficient Identification of Endogenous Mammalian Biochemical Structures, *Proc. ISBRA*, 2014.

26. S. Bandyopadhyay, S. Sahni, S. Rajasekaran: PMS6MC: A multicore algorithm for motif discovery, *Proc. ICCABS 2013*, 5 pages.

27. S. Rajasekaran, S. Saha: Efficient algorithms for sequence assembly, *Proc. ICCABS 2013*, one page.

28. S. Rajasekaran and S. Saha, A Novel Deterministic Sampling Technique to Speedup Clustering Algorithms, *Proc. 9th International Conference on Advanced Data Mining and Applications (ADMA)*, Hangzhou, China, December 14-16, 2013, pp. 34-46.

29. T. Mi and S. Rajasekaran, A two-pass exact algorithm for selection on parallel disk systems, *Proc. IEEE Symposium on Computers and Communications*, 2013.

30. S. Saha, R. Ramprasad, and S. Rajasekaran, A novel randomized feature selection algorithm, *Proc. International Conference on Data Mining (DMIN)*, 2013.

31. M. Al-Bzoor, Y. Zhu, J. Liu, R.A. Ammar, J.-H. Cui, and S. Rajasekaran, An adaptive surface sink redeployment strategy for underwater sensor networks, *Proc. IEEE Symposium on Computers and Communications*, 2013.

32. M. Maghraby, R.A. Ammar, and S. Rajasekaran, Fast GPU Algorithms for Implementing The Red-Black Gauss-Seidel Method for Solving Partial Differential Equations, *Proc. IEEE Symposium on Computers and Communications*, 2013.

33. R. Kilany, R.A. Ammar, and S. Rajasekaran, Document classification: a novel approach based on SVM, *Proc. 5th International Conference on Bioinformatics and Computational Biology (BICoB)*, March 2-6, Honolulu, HI, 2013.

34. S. Ibrahim, M. Al-Bzoor, J. Liu, R.A. Ammar, S. Rajasekaran, and J.-H. Cui, General optimization framework for surface gateway deployment problem in underwater sensor networks, *EURASIP Journal on Wireless Communications and Networking*, May 2013.

35. S.A. Mohamed, S. Rajasekaran, and R.A. Ammar, Integrating Clonal Selection and Deterministic Sampling for Efficient Associative Classification, *Proc. IEEE Congress on Evolutionary Computation (CEC)*, 2013.

36. S. Pathak, V.K. Kundeti, M.R. Schiller, and S. Rajasekaran, A structure based algorithm for improving motifs prediction, *Proc. International Conference on Pattern Recognition in Bioinformatics (PRIB)*, Springer-Verlag LNBI, 2013, pp. 242-252.

37. S. Bandyopadhyay, S. Sahni, and S. Rajasekaran, PMS6: A fast algorithm for motif discovery, *Proc. Second International Conference on Computational Advances in Bio and medical Sciences (ICCABS)*, 2012, 6 pages.

38. M. Hamdalla, D.F. Grant, I.I. Mandoiu, D.W. Hill, S. Rajasekaran, and R.A. Ammar, The use of graph matching algorithms to identify biochemical substructures in synthetic chemical compounds: Application to metabolomics, *Proc. Second International Conference on Computational Advances in Bio and medical Sciences (ICCABS)*, 2012, 6 pages.

39. A. Ebaid, R.A. Ammar, and S. Rajasekaran, Energy consumption of a duplication based scheduling approach: a case study, *Proc. IEEE Symposium on Signal Processing and Information Technology*, December 2012, Ho Chi Minh City, Vietnam.

40. S.A. Mohamed, S. Rajasekaran, and R.A. Ammar, Artificial Immune Systems: Models, Applications, and Challenges, *Proc. 27th ACM Symposium on Applied Computing (SAC'12)*, Riva del Garda, Italy March 2012.

41. S.A. Mohamed, S. Rajasekaran, and R.A. Ammar, An Artificial Immune System Approach to Associative Classification. ICCSA (1) 2012, 161-171. *Workshop on Bio-inspired Computing and Applications (BIOCA 2012)*.

42. S.A. Mohamed, S. Rajasekaran, and R.A. Ammar, AC-CS: An Immune-Inspired Associative Classification Algorithm, *ICARIS 2012*, pp. 139-151.

43. S.A. Mohamed, S. Rajasekaran, and R.A. Ammar, ML-DS: A Novel Deterministic Sampling Algorithm for Association Rules Mining, *Proc. ICDM 2012*, pp. 224-235.

44. H. Dinh and S. Rajasekaran, Workshop: An efficient data structure for exact-match overlap graphs and next generation sequence assembly, *IEEE ICCABS* 2012, page 1.

45. M. Al-Bzoor, Y. Zhu, J. Liu, R.A. Ammar, J.-H. Cui, and S. Rajasekaran, Adaptive Power Controlled Routing for Underwater Sensor Networks, *Proc. WASA*, 2012, pp. 549-560.

46. J. Liu, X. Han, M. Al-Bzoor, M. Zuba, J.-H. Cui, R.A. Ammar, and S. Rajasekaran, PADP: Prediction assisted dynamic surface gateway placement for mobile underwater networks, *Proc. ISCC 2012*, pp.139-144.

47. R. Kilany, R.A. Ammar, and S. Rajasekaran, A novel algorithm for technical articles classification based on gene selection, *Proc. ISCC*, 2012, pp. 234-238.

48. M. Maghrbay, R.A. Ammar, and S. Rajasekaran, Fast GPU algorithms for endmember extraction from hyperspectral images, *Proc. ISCC*, 2012, pp. 631-636.

49. S. Tolba, L. Fiondella, R.A. Ammar, S. Rajasekaran, N. Lownes, Q Wang, A wireless sensor deployment toolkit for road network and city-scale protection, *Proc. National Security Innovation Competition*, April (2nd Quarter/Spring) 2012.

50. S. Rajasekaran, Computational Techniques for Motif Search, *4th International Conference on Contemporary Computing (IC3)*, August 2011, Noida, India, 2011, p. 4.

51. S. Rajasekaran, H Dinh V. Kundeti, *Workshop: Efficient sequential and parallel algorithms for sequence assembly*, ICCABS 2011: 274.

52. M. Maghraby, R.A. Ammar, and S. Rajasekaran, Improving N-Finder technique for extracting endmembers, *Proc. 11th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT)*, Dec. 14-17, Bilbao, Spain, 2011, pp. 42-49.

53. R. Kilany, R.A. Ammar, and S. Rajasekaran, A correlation-based algorithm for classifying technical articles, *Proc. 11th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT)*, Dec. 14-17, Bilbao, Spain, 2011, pp. 50-53.

54. L. Fiondella, S. Rajasekaran, and S.S. Gokhale, Efficient System Reliability with Correlated Component Failures, *Proc. 13th IEEE International High Assurance Systems Engineering Symposium (HASE)*, Boca Raton, FL, Nov. 10 to 12, 2011, pp. 269-276.

55. N. Lownes, R. Ammar, S. Rajasekaran, L. Fiondella, and Q. Wang, Securing America's Future Transportation Infrastructure: Network Vulnerability and High-Speed Rail, (with N. Lownes, R. Ammar, L. Fiondella, and Q. Wang), *Proc. of The DHS Science Conference - Fifth Annual University Network Summit*, Washington, DC, Mar 2011. Panel 15 (accepted for publication in Journal of Homeland Security).

56. N. Lownes, Q. Wang, and D.A. Sharma, An Efficient Heuristic for Estimating Transportation Network Vulnerability, *Proc. IEEE International Symposium on Computers and Communication*, Greece June 28th-July 1st, 2011.

57. L. Fiondella, S. Tolba, A. Byrd, Q. Wang, R. Ammar, S. Rajasekaran, and N. Lownes, Optimal Deployment and Protection of High-Speed Rail, *Proc. Of the Fifth Annual Department of Homeland Security Student Day*, Washington, DC, pp. 55-56, Mar 2011. Panel 3.

58. Q. Wang, L. Fiondella, A. Byrd, S. Tolba, R. Ammar, S. Rajasekaran, and N. Lownes A Many to Many Theory Approach to Measuring Transportation Network Vulnerability, *Proc. of the Fifth Annual Department of Homeland Security Student Day*, Washington, DC, pp. 87-88, Mar 2011. Panel 3.

59. M. Hamdalla, D. Grant, S. Rajasekaran, R. Ammar, and D. Hill, Efficient Prediction of Biological Structures from Molecular Formulas, *15th International Conference on Research in Computational Molecular Biology (RECOMB) Poster*, Vancouver, BC, March 28-31, 2011.

60. S. Ibrahim, R.A. Ammar, S. Rajasekaran, N. Lownes, Q. Wang, D. Sharma, An efficient heuristic for estimating transportation network vulnerability, *Proc. International Symposium on Computers and Communication*, 2011: 1092-1098.

61. S. Tolba, L. Fiondella, R.A. Ammar, N. Lownes, S. Rajasekaran, J. Ivan, and Q. Wang, Modeling Attacker-Technology System Interaction in Transportation Networks: P2I3-Model, *Proc. 11th IEEE International Conference on Technologies for Homeland Security (HST 2011)*, Waltham, MA, pp. 306-312, Nov 2011.

62. Q. Wang, L. Fiondella, N. Lownes, J. Ivan, R.A. Ammar, S. Rajasekaran, and S. Tolba, Integrating Equilibrium Assignment in Game-theoretic Approach to Measure Many-to-Many Transportation Network Vulnerability, *Proc. 11th IEEE International Conference on Technologies for Homeland Security (HST 2011)*, Waltham, MA, pp. 351-357, Nov 2011.

63. N.E. Lownes, Q. Wang, S. Ibrahim, R.A. Ammar, S. Rajasekaran, and D.A. Sharma, Many-to-Many Game Theoretic Approach to Measuring Transportation Network Vulnerability, *Proceedings of the 90th Annual Meeting of the Transportation Research Board*, Washington, DC, 2011.

64. V. Kundeti and S. Rajasekaran, An Efficient Algorithm for Chinese Postman Walk on Bi-directed de Bruijn Graphs, *Proceedings of the Combinatorial Optimization and Applications*, 4th International Conference (COCOA 2010), pp. 184-196, Kailua-Kona, HI, December 18-20, 2010.

65. V. Kundeti and S. Rajasekaran, Randomized self assembly of rectangular nano structures, *Proceedings of the 16th International Conference on DNA Computing and Molecular Programming*, Hong Kong, June 14-17, 2010.

66. N. Lownes, R.A. Ammar, and S. Rajasekaran, Transportation Network Risk Modeling, *The First Franco-American Symposium on Linear Infrastructures Security*, Troyes, France, November 4, 2010.

67. S. Rajasekaran, D. Sharma, R.A. Ammar, and N. Lownes, An Efficient Randomized Routing Protocol for Single-Hop Radio Networks, *Proc. International Conference on Parallel Processing (ICPP)*, San Diego, September, 2010.

68. D. Trinca and S. Rajasekaran, Coping with Diffraction Effects in Protein-based Computing through a Specialized Approximation Algorithm with Constant Overhead, *Proc. IEEE NANO*, Seoul, Korea, August 17-20, 2010.

69. D. Trinca and S. Rajasekaran, Using a Specialized Compression Scheme based on Antidictionaries for Coping with Diffraction Effects in Protein-based Computing, *Proc. 14th International Biotechnology Symposium and Exhibition*, Rimini, Italy, September 14-18, 2010.

70. V. Kundeti, S. Rajasekaran, and H. Dinh, On the Border Length Minimization Problem (BLMP) on a Square Array, *Proc. ACM International Conference on Bioinformatics and Computational Biology (BCB)*, Niagara Falls, August 2010.

71. D. Sharma, S. Rajasekaran, R.A. Ammar, N. Lownes, and S. Ibrahim, Multi-level Sensor Deployment Algorithm for Wireless Sensor Networks, *Proc. 1st International Conference on Advanced Computing and Communication*, September 15-17, 2010, Orlando, Florida.

72. M. El-Maghraby, R.A. Ammar, S. Rajasekaran, I. Abou El-Bagd, W. Sheta, S. Nassar, and Ayman El-Dessouki Towards a Fast Surface Energy Balance Algorithm for Land, *Proc. 1st International Conference on Advanced Computing and Communication*, September 15-17, 2010, Orlando, Florida.

73. M. Maghrbay, R.A. Ammar, and S. Rajasekaran, A Randomized Automatic Pixel Purity Index Technique, *Proceedings of the 25th International Conference on Computers and Their Applications*, Honolulu, Hawaii, March 24-26, 2010, pp. 7-12.

74. A. Ebaid, R.A. Ammar, S. Rajasekaran and T.A. Fergany, Task Clustering & Scheduling with Duplication using Recursive Critical Path Approach (RCPA), *Proceedings of the IEEE International Symposium on Signal Processing and Information Technology* (ISSPIT 2010), Luxor, Egypt, pp. 34-41, December 15-18, 2010.

75. M.F. Ahmed, R.A. Ammar, and S. Rajasekaran, FFTI: Fast In-Place FFT on the Cell Broadband Engine, *Proceedings of the 25th International Conference on Computers and Their Applications*, Honolulu, Hawaii, March 24-26, 2010, pp. 167-173.

76. S. Rajasekaran, O. Harel, M. Zuba, and G. Matthews, Responsible Data Releases, *Proc. Industrial Conference on Data Mining*, Leipzig, Germany, July 20-22, 2009, Springer LNCS 5633, pp. 388-400.

77. S. Al Seesi, S. Rajasekaran, and R.A. Ammar, RNA Pseudoknot Folding through Inference and Identification using TAGRNA, *Proc. 1st International Conference on Bioinformatics and Computational Biology (BICoB)*, 2009, LNBI 5462, pp. 90-101.

78. M.F. Ahmed, R.A. Ammar, and S. Rajasekaran, Novel Micro-Threading Techniques on the Cell Broadband Engine, *Proceedings of the 14th IEEE Symposium on Computers and Communication*, pp. 570-575, Sousse, Tunis, July 5-8, 2009.

79. D. Trinca and S. Rajasekaran, Optimized Bzip2 Compression for Reducing Diffraction Effects in Protein-Based Computing: A Study of Feasibility, *Proc. 31st Annual International IEEE EMBS Conference*, September 2-6, 2009, Minneapolis, MN.

80. R. Kilany, R.A. Ammar, S. Rajasekaran, and W. Sheta, A New Framework for High Performance Processing of Voluminous Multisource Datasets, *Proc. 11th International Business Information Management Conference (11th IBIMA)*, Cairo, Egypt, January 4-6, 2009.

81. S. Rajasekaran, S. Al Seesi, and R.A. Ammar, Improved algorithms for parsing ESLTAGs: A grammatical model suitable for RNA pseudoknots, *Proc. International Symposium on Bioinformatics Research and Applications (ISBRA)* 2009, LNBI 5542, Springer, Heidelberg, May 2009, pp. 135-147.

82. V. Kundeti and S. Rajasekaran, Efficient algorithms for self assembling triangular and other nano structures, *Proceedings of 5th International Symposium on Bioinformatics Research and Applications (ISBRA)*, May, 2009, LNBI 5542, pp. 148-158.

83. S. Rajasekaran, Efficient algorithms and system for motif search, *Proc. National Symposium on Biocomputing*, Annamalai University, India, Feb. 23, 2009, pp. 1-12.

84. V. Kundeti and S. Rajasekaran, Generalized algorithms for generating balanced modulation codes in protein-based volumetric memories, *Proceedings of 10th Annual IEEE Congress on Evolutionary Computation (IEEE CEC)*, May 18-21, 2009, Norway.

85. V. Kundeti and S.Rajasekaran, On the hardness of the border length minimization problem, *Proceedings of 9th Annual IEEE International Conference on BioInformatics and BioEngineering (BIBE)*, June 22-24, 2009, Taichung, Taiwan.

86. D. Sharma and S. Rajasekaran, A simple algorithm for (l, d) motif search, *Proc. IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology*, March 30-April 2, 2009, Nashville, TN.

87. D. Sharma, S. Balla, S. Rajasekaran, and N. DiGirolamo, Degenerate primer selection algorithms, *Proc. IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology*, March 30-April 2, 2009, Nashville, TN.

88. S. Rajasekaran, V. Kumar, S. Sahni, and R. Birge, Efficient Algorithms for Protein-Based Associative Processors and Volumetric Memories, *Proc. 8th IEEE International Conference on Nanotechnology (IEEE NANO)*, August 18-21, Arlington, TX, 2008, pp. 397-400.

89. V. Kundeti and S. Rajasekaran, Efficient PDM Sorting Algorithms, *Proceedings of 15th Annual IEEE International Conference on High Performance Computing (IEEE/ACM HiPC)*, December, 2008, pp. 97-107.

90. V. Kundeti and S. Rajasekaran, A local structual alignment algorithm with variable length alignment fragment pairs, *Proceedings of 8th Annual IEEE International Conference on BioInformatics and BioEngineering (IEEE BIBE)*, October, 2008.

91. T. Mi, R. Aseltine, and S. Rajasekaran, Data integration on multiple data sets, *Proc. IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, Philadelphia, PA, November 3-5, 2008, pp. 443-446.

92. V. Kundeti, Y. Fei, and S. Rajasekaran, An efficient digital circuit for implementing sequence alignment algorithm in an extended processor, *Proceedings of 19th Annual IEEE International Conference on Application-specific Systems, Architectures and Processors (IEEE ASAP)*, July, 2008, pp.156-161.

93. M. Song and S. Rajasekaran, A novel scheme for the detection of an unknown class in classification, *Proceedings of the International Conference on Data Mining (DMIN)*, 2008, pp. 10-13.

94. S. Balla, S. Rajasekaran, and I.I. Mandoiu, Faster Greedy Algorithms for Multiple Degenerate Primer Selection, *Proceedings of the 8th IEEE International Conference on Bioinformatics and Bioengineering*, Athens, Greece, October 8-10, 2008.

95. S. Al Seesi, S. Rajasekaran, and R.A. Ammar, Pseudoknot identification through learning TAGRNAs, *Proc. Pattern Recognition in Bioinformatics (PRIB)*, 2008, Springer LNCS 5265, pp. 132-143.

96. D. Sharma, V. Thapar, S. Rajasekaran, R.A. Ammar, and M.F. Ahmed, Efficient Sorting Algorithms for the Cell Broadband Engine, *Proceedings of the 13th IEEE Symposium on Computers and Communication (ISCC)*, Marrakesh, Morocco, July 5-9, 2008, pp. 736-741.

97. M.F. Ahmed, R.A. Ammar, and S. Rajasekaran, SPENK: Adding Another Level of Parallelism on the Cell Broadband Engine, *Proceedings of the 1st International Forum on Next-Generation Multicore/Manycore Technologies (IFMT)*, Cairo, Egypt, November 24-25, 2008, pp. 1-10.

98. V. Kundeti and S. Rajasekaran, Extending the Four Russian Algorithm to Compute the Edit Script in Linear Space, *Proc. International Conference on Computational Science*, Springer-Verlag LNCS, 2008, pp. 893-902.

99. M. Song and S. Rajasekaran, A Novel Scheme for the Detection of an Unknown Class in Classification, to be presented in *International Conference on Data Mining*, 2008.

100. D. Sharma, V. Thapar, R. Ammar, S. Rajasekaran, and M. Ahmed, Efficient Sorting Algorithms for the Cell Broadband Engine, to be presented in the *IEEE International Symposium on Computers and Communication*, 2008.

101. S. Rajasekaran, Parallel algorithms for motif search, *Proc. ISCA PDCS*, 2007, pp. 175-180.

102. R. A. Ammar, S. Rajasekaran, A. Hussein, A. Hamdy, Efficient Scheduling of Real-time Tandem Task Graphs on Heterogeneous Clusters with Network Limitations, *Proc. IEEE International Conference on Computers and Communications (ISCC)* 2007, pp. 227-232.

103. J. Davila, S. Balla, and S. Rajasekaran, Fast Algorithms for Selecting Specific siRNA in Complete mRNA Data, *Proc. WABI*, 2007, Springer-Verlag LNBI 4645, pp. 302-309.

104. M. Song and S. Rajasekaran, A Greedy Correlation-Incorporated SVM-Based Algorithm for Gene Selection, *Proc. AINA Workshops (1)*, 2007, pp. 657-661.

105. D. Trinca and S. Rajasekaran, Self-Optimizing Parallel Algorithms for Haplotype Reconstruction and Their Evaluation on the JPT and CHB Genotype Data, *Proc. BIBE*, 2007, pp. 1294-1298.

106. D. Trinca and S. Rajasekaran, Fast Cryptographic Multi-party Protocols for Computing Boolean Scalar Products with Applications to Privacy-Preserving Association Rule Mining in Vertically Partitioned Data, *Proc. DaWaK*, 2007, Springer-Verlag LNAI 4597, pp. 418-427.

107. M.I. Soliman, S. Rajasekaran and R.A. Ammar, A Block JRS Algorithm for Highly Parallel Computation of SVDs, *Proc. HPCC*, 2007, Springer-Verlag LNCS, pp. 346-357.

108. D. Trinca and S. Rajasekaran, Fast Cryptographic Multi-Party Protocols for Computing Boolean Scalar Products with Applications to Privacy-Preserving Association: Rule Mining in Vertically Partitioned Data, *Proc. Industrial Conference on Data Mining*, 2007.

109. S. Balla and S. Rajasekaran, Space and Time Efficient Algorithms to Discover Endogenous RNAi Patterns in Complete Genome Data, *Proc. ISBRA*, 2007, pp. 260-269.

110. Jaime Davila, Sudha Balla, Sanguthevar Rajasekaran, Space and Time Efficient Algorithms for Planted Motif Search, *Proc. International Conference on Computational Science* (2), 2006, pp. 822-829.

111. J. Davila and S. Rajasekaran, Extending Pattern Branching to Handle Challenging Instances, *Proc. 6th IEEE International Symposium on Bioinformatics and Bioengineering (BIBE)*, 2006.

112. S. Rajasekaran and M. Song, A Novel Scheme for the Parallel Computation of SVDs, *Proc. International Conference on High Performance Computing and Communications (HPCC)*, Springer-Verlag Lecture Notes in Computer Science 4208, 2006, pp. 129-137.

113. K.M. Konwar, S. Rajasekaran, and A. Shvartsman, Robust Network Supercomputing with Malicious Processes, *Proc. 20th International Symposium on Distributed Computing (DISC)*, Springer-Verlag Lecture Notes in Computer Science, 2006.

114. V. Thapar, A.A. Mohamed, and S. Rajasekaran, A Consensus Text Summarizer Based on Meta-Search Algorithms, *Proc. 6th IEEE Symposium on Signal Processing and Information Technology (ISSPIT)*, August 2006.

115. A.A. Mohamed and S. Rajasekaran, Improving Query-Based Summarization Using Document Graphs, *Proc. 6th IEEE Symposium on Signal Processing and Information Technology (ISSPIT)*, August 2006.

116. S. Demurjian, S. Rajasekaran, R. Ammar. I. Greenshields, T. Doan, and L. He, Applying LSI and Data Reduction to XML for Counter Terrorism, *Proc. 27th IEEE Aerospace Conference*, Big Sky, MT, March 2006.

117. S. Rajasekaran and M. Song, A Novel Scheme for the Parallel Computation of SVDs, *Proc. HPCC*, 2006, pp. 129-137.

118. S. Rajasekaran, R. Ammar, S. Demurjian, A. Abdel-Raouf, T. Doan, J. Lian, M. Song, and A. Mohamed, Strategies to Process High Volumes of Data in Support of Counter-terrorism, *IEEE Aerospace Conference*, March 2005.

119. M. Song and S. Rajasekaran, Fast k-Means Algorithms with Constant Approximation, *Proc. International Symposium on Algorithms and Computations (ISAAC)*, Springer-Verlag LNCS 3827, 2005, pp. 1029-1038.

120. S. Rajasekaran and S. Sen, A Simple Optimal Randomized Algorithm for Sorting on the PDM, *Proc. International Symposium on Algorithms and Computations (ISAAC)*, Springer-Verlag LNCS 3827, 2005, pp. 543-552.

121. S. Rajasekaran and S. Sen, PDM Sorting Algorithms that Take a Small Number of Passes, *Proc. International Parallel and Distributed Processing Symposium (IPDPS)*, 2005.

122. S. Rajasekaran, S. Balla, C.-H. Huang, V. Thapar, M. Gryk, M. Maciejewsky, and M. Schiller, Efficient algorithms for motif search, *Proc. Third Asia-Pacific Bioinformatics Conference (APBC)*, 2005, pp. 239-248.

123. S. Rajasekaran, S. Balla, and C.-H. Huang, Exact algorithms for planted motif challenge problems, *Proc. Third Asia-Pacific Bioinformatics Conference (APBC)*, 2005, pp. 249-259.

124. M. Song and S. Rajasekaran, TM algorithm for frequent itemset mining, KDD, *Proc. ACM Symp. on Applied Computing special session on data mining*, 2005.

125. Chun-Hsi Huang and Sanguthevar Rajasekaran, BioGrid: Bridging Life Science and Information Technology, *Proc. of the 5-th IEEE/ACM Cluster Computing and the Grid (3rd BioGrid Workshop)*, May 9-12, 2005, Cardiff, UK.

126. Sanguthevar Rajasekaran, Efficient Algorithms for Motif Search, Keynote speech, *Second International Conference on Intelligent Computing & Information Systems (ICICIS)*, Cairo, Egypt, March 5-7, 2005.

127. J. Luo and S. Rajasekaran, A Framework for Mining Association Rules, *Proc. Ninth International Conference on Knowledge-Based Intelligent Information & Engineering Systems (KES) 4*, Springer-Verlag LNCS/LNAI 3684, 2005, pp. 509-517.

128. A. Amin, R. A. Ammar, and S. Rajasekaran, Maximizing Reliability While Scheduling Real-Time Task-Graphs on a Cluster of Computers, *Proc. Tenth IEEE International Symposium on Computers and Communications (ISCC)*, 2005, pp. 1001-1006.

129. A. A. Mohamed and S. Rajasekaran, A Text Summarizer Based on Meta-Search, *Proc. 5th IEEE Symposium on Signal Processing and Information Technology (ISSPIT)*, December 2005, pp. 670- 674.

130. Alaa Amin, Reda Ammar and Sanguthevar Rajasekaran, A Randomized Algorithm to Schedule Real-Time Task Graphs to Satisfy a Multi-Criteria Objective Function, *Proc. IEEE International Symposium on Signal Processing and Information Technology (ISSPIT)*, Rome, Italy, December 2004.

131. S. Rajasekaran, R. Ammar, B. Cheriyan, and L. Loew, Parallel techniques for the virtual cell, *Proc. International Symposium on Signal Processing and Information Technology (ISSPIT)*, 2004.

132. S. Rajasekaran, V. Thapar, H. Dave, and C.-H. Huang, A randomized algorithm for distance matrix calculations in multiple sequence alignment, *Proc. International Conference on Knowledge Exploration in Life Science Informatics (KELSI)*, July 16, 2004, Springer-Verlag, pp. 33-45.

133. C.-W. Lee, C.-H. Huang, S. Rajasekaran, L. Yang, and D. Frank Hsu, Distributed Path-Based Inference in Semantic Networks, *Proc. of 7th IEEE Int'l Symp. on Parallel Architectures, Algorithms and Networks (I-SPAN)*, 232-237, May 10-12 2004, Hong Kong, China.

134. S. Rajasekaran, Efficient parallel hierarchical clustering algorithms, *Proc. Tenth IEEE International Conference on Parallel and Distributed Computing Systems (PDCS)*, 2004.

135. J. Luo and S. Rajasekaran, FIT: A fast algorithm for discovering frequent itemsets in large databases, Proc. *8th International Conference on Knowledge-Based Intelligent Information & Engineering Systems (KES 2004)*, Springer-Verlag.

136. S. Rajasekaran and J. Davila, Packet routing and selection on the POPS network, *Proc. Tenth IEEE International Conference on Parallel and Distributed Systems (ICPADS)*, 2004.

137. J. Davila and S. Rajasekaran, Randomized sorting on the POPS network, Proc. *International Conference on Parallel and Distributed Computing Systems (PDCS)*, 2004.

138. S. Rajasekaran, R. Ammar, K. Reifsnider, L. Achenie, A. Mohamed, G. Zhang, and M. Ahmed, Efficient parallel simulation of direct methanol fuel cell models, *Proc. 19th ISCA International Conference on Computers and their Applications*, 2004, pp. 75-78.

139. L. Yin, C.-H. Huang, and S. Rajasekaran, Parallel data mining of Bayesian networks from gene expression data, *RECOMB Currents in Computational Computational Molecular Biology*, 2004, pp. 122-123.

140. C.-H. Huang, S. Rajasekaran, and L. Yin, Cooperative biomedical knowledge inference, *RECOMB Currents in Computational Computational Molecular Biology*, 2004, pp. 556-557.

141. R. Trumbower, P. Faghri, and S. Rajasekaran, Rigid link-segment models as predictors of semi-reclined leg cycling kinematics, *Proc. RESNA Conference*, Orlando, June 20-22, 2004.

142. C.-H. Huang and S. Rajasekaran, Biomedical Computations on the Grid - Organizing Chairs' Note, *Proc. of the 4-th IEEE/ACM Symposium on Cluster Computing and the Grid (CCGrid)- Second BioGrid Workshop*, published in CD-ROM, Apr. 19-22, 2004, Chicago, IL.

143. S. Rajasekaran, R. Ammar, D.-G. Shin, and G. Zhang, Efficient Parallel Algorithms for Processing Biological Sequences, *Proc. IEEE International Symposium on Signal Processing and Information Technology*, 2003.

144. J. Lim and S. Rajasekaran, Parallel cache management protocol and algorithm for cooperative web servers, Proc. *IEEE International Conference on Communications (ICC)*, Alaska, May 2003.

145. C.-W. Lee, C.-H. Huang, and S. Rajasekaran, TROJAN: A Scalable Parallel Semantic Network System, *Proc. of 15th IEEE Int'l Conference on Tools with Artificial Intelligence (IC-TAI)*, 219-223, Nov. 3-5 2003, Sacramento, CA.

146. J. Lim and S. Rajasekaran, Directly Selected and Limited Look up Cache Algorithm for Dynamic Web Contents, Proc. *9th International Conference on Networks, Parallel and Distributed Processing, and Applications*, October 2002, Tsukuba, Japan.

147. J. Lim and S. Rajasekaran, Parallel Cache Management Protocol for Static and Dynamic Web Contents, Proc. *IADIS International WWW/Internet 2002 Conference (ICWI)*, November 2002, Lisbon, Portugal, pp. 20-28.

148. J. Lim and S. Rajasekaran, Distributed Cache Content Management Protocol for Cooperative Web Servers, Proc. *14th International Conference on Parallel and Distributed Computing and Systems*, November 2002, Cambridge, U.S.A.

149. L. Fu and S. Rajasekaran, Novel Algorithms for Computing Medians and Other Quantiles of Disk Resident Data, Proc. *International Database Engineering and Applications Symposium (IDEAS)*, 2001.

150. J. Luo, S. Rajasekaran, and C. Qiu, Parallelizing Wave Simulation Model by Using PVM, Proc. *8th Annual European PVM/MPI Conference*, 2001.

151. S. Rajasekaran and X. Jin, A Practical Realization of Parallel Disks, Proc. *Workshop on High Performance Scientific and Engineering Computing with Applications*, 2000.

152. S. Rajasekaran, P. Sheng, L Jun, A Simple Parallel Algorithm for Solving Banded Systems, Proc. *International Conference on Parallel and Distributed Computing Systems (PDCS)*, 1999.

153. * (Invited) S. Rajasekaran, H. Nick, P.M. Pardalos, S. Sahni, G. Shaw, Algorithms for Local Alignment Search, presented in the *DIMACS Workshop on Discrete Problems with Medical Applications*, 1999.

154. * (Invited) S. Rajasekaran, K. Naik, D. Wei, Frequency Assignment Algorithms for Cellular Networks, Proc. *DIMACS Workshop on Mobile Networks and Computing*, 1999.

155. * (Invited) X. Liu, P.M. Pardalos, S. Rajasekaran, and M.G.C. Resende, A GRASP for Frequency Assignment in Mobile Radio Networks, Proc. *DIMACS Workshop on Mobile Networks and Computing*, 1999.

156. S. Rajasekaran, A Framework For Simple Sorting Algorithms On Parallel Disk Systems, Proc. *10th Annual ACM Symposium on Parallel Algorithms and Architectures*, 1998.

157. S. Rajasekaran, Selection Algorithms for Parallel Disk Systems, Proc. *International Conference on High-Performance Computing*, 1998.

158. S. Rajasekaran and S. Sahni, Randomized Routing, Selection, and Sorting on the OTIS-Mesh, Proc. *European Symposium on Parallel and Distributed Systems*, 1998.

159. S. Rajasekaran and S. Sahni, Computing on the Array with Reconfigurable Optical Buses, Proc. *World Multiconference on Systemics, Cybernetics, and Informatics*, Caracas, 1997, Volume 1, pp. 459-466.

160. * (Invited) S. Rajasekaran, Basic Algorithms for Computing on Optical Models, IMA Workshop on Parallel Processing for Discrete Problems, 1997.

161. * (Invited) S. Rajasekaran, Computing on Optical Models, DIMACS Workshop on Randomization Methods in Algorithm Design, 1997.

162. S. Rajasekaran and D.S.L. Wei, Designing Efficient Distributed Algorithms Using Sampling Techniques, Proc. *International Parallel Processing Symposium*, 1997.

163. S. Rajasekaran and S. Sahni, Sorting and Routing on the Array with Reconfigurable Optical Buses, Proc. 3rd International Conference on Algorithms and Parallel Processing, Singapore, 1996, pp. 105-112.

164. B. Thorndyke, P.A. Fishwick, and S. Rajasekaran, A Randomized Approach to Hybrid Monte-Carlo Simulation, Proc. *SCS Simulation Multiconference*, 1996, pp. 13-17.

165. D. S. L. Wei, S. Rajasekaran, and S. Kuo, Efficient Selection and Sorting Schemes for Processing Large Distributed Files in Finite Projectives Planes, Proc. International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA) 1996, Vol. I, pp. 69-78.

166. S. Rajasekaran and S. Yooseph, TAL Parsing in $O(M(n^2))$ Time, Proc. *Meeting of the Association for Computational Linguistics*, 1995.

167. S. Rajasekaran and S. Sahni, Sorting and Selection on the Distributed Memory Bus Computer, Proc. *International Conference on Parallel Processing*, 1995.

168. S. Rajasekaran, W. Chen, and S. Yooseph, Unifying Themes for Parallel Selection, Proc. *Fifth International Symposium on Algorithms and Computation*, August 1994. Springer-Verlag Lecture Notes in Computer Science 834, pp. 92-100.

169. I. Lee and S. Rajasekaran, A Parallel Algorithm for Relational Coarsest Partition Problems and Its Implementation, Proc. *6th International Conference on Computer Aided Verification*, June 1994. Springer-Verlag Lecture Notes in Computer Science 818, 1994, pp. 404-414.

170. * (Invited) S. Rajasekaran, Packet Routing on Meshes with Buses, presented in the *DIMACS Workshop on Organizing and Moving Data in Parallel Computers*, January 26-28, 1994.

171. S. Rajasekaran and S. Ramaswami, Optimal Parallel Randomized Algorithms for the Voronoi Diagram of Line Segments in the Plane and Related Problems, Proc. *10th Annual ACM Computational Geometry Conference*, June 1994, pp. 57-66.

172. J.C. Cogolludo and S. Rajasekaran, Permutation Routing on Reconfigurable Meshes, Proc. *Fourth Annual International Symposium on Algorithms and Computation*, Hong Kong, December 1993. Springer-Verlag Lecture Notes in Computer Science 762, 1993, pp. 157-166.

173. S. Rajasekaran, Mesh Connected Computers with Fixed and Reconfigurable Buses: Packet Routing, Sorting, and Selection, Proc. *First Annual European Symposium on Algorithms*, Oct. 1993. Springer-Verlag Lecture Notes in Computer Science 726, 1993, pp. 272-283.

174. I. Lee and S. Rajasekaran, Fast Parallel Algorithms for Model Checking using BDDs, Proc. *International Parallel Processing Symposium*, pp. 444-448, April 1993.

175. S. Rajasekaran and D.S.L. Wei, Selection, Routing, and Sorting on the Star Graph, Proc. *International Parallel Processing Symposium*, pp. 661-665, April 1993.

176. S. Rajasekaran and S. Ramaswami, Optimal Mesh Algorithms for the Voronoi Diagram of Line Segments, Visibility Graphs, and Motion Planning in the Plane, Proc. *Allerton Conference on Communication, Control, and Computing*, July 1992.

177. M. Kaufmann, S. Rajasekaran, and J.F. Sibeyn, Matching the Bisection Bound for Routing and Sorting on the Mesh, Proc. *4th Annual ACM Symposium on Parallel Algorithms and Architectures*, pp. 31-40, July 1992.

178. S. Rajasekaran and M. Raghavachari, Optimal Randomized Algorithms for Multipacket and Cut Through Routing on the Mesh, Proc. *IEEE Symposium on Parallel and Distributed Processing*, December 1991, Dallas, Texas, pp. 305-311.

179. M.A. Palis, S. Rajasekaran, and D.S.L. Wei, Emulation of PRAMs on Leveled Networks, Proc. *International Conference on Parallel Processing*, 1991.

180. S. Rajasekaran and R. Overholt, Constant Queue Routing on a Mesh, Proc. *Symposium on Theoretical Aspects of Computer Science*, Feb. 1991, Hamburg, Germany. Springer-Verlag Lecture Notes in Computer Science 480, pp. 444-455.

181. S. Rajasekaran, Randomized Parallel Selection, Proc. *Tenth conference on Foundations of Software Technology and Theoretical Computer Science*, Dec. 1990, Bangalore, India. Springer-Verlag Lecture Notes in Computer Science 472, pp. 215-224.

182. T. Alameldin, M. Palis, S. Rajasekaran, and N. Badler, On the Complexity of Computing Reachable Workspaces for Redundant Manipulators, Proc. *SPIE Intelligent Robots and Computer Vision IX: Algorithms and Techniques*, 1990.

183. M.A. Palis, S. Rajasekaran, and D.S.L. Wei, Optimal Routing Algorithms for a New Class of Interconnection Networks, Proc. *International Parallel Processing Symposium*, April 1990.

184. S. Rajasekaran and J.H. Reif, Nested Annealing: A Provable Improvement to Simulated Annealing, Proc. *15th International Colloquium on Automata, Languages, and Programming*, July 1988. Springer-Verlag Lecture Notes in Computer Science 317, pp.455-472.

185. D. Krizanc, S. Rajasekaran and T. Tsantilas, Optimal Routing Algorithms for Mesh-Connected Processor Arrays, Proc. *Third International Aegean Workshop on Parallel Computation and VLSI theory.* Springer-Verlag Lecture Notes in Computer Science 319, pp. 411-422, 1988.

186. S. Rajasekaran and T. Tsantilas, An Optimal Randomized Routing Algorithm for the Mesh and A Class of Efficient Mesh-Like Routing Networks, Proc. *7th Conference on Foundations of Software Technology and Theoretical Computer Science*, Pune, India, Dec. 1987. Springer-Verlag Lecture Notes in Computer Science 287, pp. 226-241.

187. * (Invited) S. Rajasekaran and S. Sahni, Arrays with Reconfigurable Optical Buses, *Workshop on Parallel Processing of Discrete Problems*, Institute for Mathematics and its Applications Minneapolis MN (May 12-16, 1997).

188. * (Invited) S. Rajasekaran and S. Sahni, Computing on the Array with Reconfigurable Optical Buses, *International Conference in Computer Science*, Caracuss, Venezuela, July 1997.

189. * (Invited) S. Rajasekaran, Sorting and Selection on Interconnection Networks, *DIMACS Workshop on Interconnection Networks and Mapping and Scheduling Parallel Computation*, Feb. 7-9, 1994.

190. * (Invited) S. Rajasekaran, Packet Routing on Meshes with Buses, *DIMACS Workshop on Organizing and Moving Data in Parallel Computers*, January 26-28, 1994.

191. * (Invited) S. Rajasekaran, Mesh Connected Computers with Fixed and Reconfigurable Buses, *DIMACS workshop on Models, Architectures, and Technologies for Parallel Computation*, Sept 20-22, 1993.

192. * (Invited) S. Rajasekaran, Separability of a Random Graph and Applications, presented in the *Fifth International Seminar on Random Graphs and Probabilistic Methods in Combinatorics and Computer Science, RANDOM GRAPHS 91*, Poznań, Poland, August 1991.

193. R. Paturi, S. Rajasekaran, and J.H. Reif, The Light Bulb Problem, Proc. *Second Workshop on Computational Learning Theory*, Santa Cruz, pp. 261-268, July 1989.

194. * (Invited) S. Rajasekaran and J.H. Reif, Randomized Parallel Computation, *Fundamentals of Computation Theory Conference*, Kazen, USSR, August 1987. Springer-Verlag Lecture Notes in Computer Science 278, pp. 364-376.

195. * (Invited) S. Rajasekaran and J.H. Reif, Randomized Parallel Computation, Presented in the *1987 Princeton Workshop on Algorithm, Architecture and Technology Issues in Models of Concurrent Computations,*.

Research Patents

1. S. Rajasekaran and R.A. Gopalakrishna, Efficient searching techniques, US Patent 7,634,470, December 15, 2009.

2. S. Rajasekaran and R. Varadarajan, Techniques for searching encrypted files, US Patent 7,484,092, January 27, 2009.

3. S. Rajasekaran, G.R. Hird, and B.N. Kausik, Method and system for camouflaging access-controlled data, US Patent 7,454,782, November 18, 2008.

4. S. Rajasekaran, Efficient Techniques for Sharing a Secret, US Patent 7,167,565, January 23, 2007.

5. S. Rajasekaran and R. Varadarajan, One-Time Credit Card Number Generator and Single Round-Trip Authentication, US Patent 6,908,030, June 21, 2005.

6. S. Rajasekaran and R.A. Gopalakrishna, Efficient Computational Techniques for Authorization Control, US Patent 6,928,427, August 9, 2005.

7. S. Rajasekaran and R.A. Gopalakrishna, Efficient Searching Techniques, US Patent 6,959,303, October 25, 2005.

8. S. Rajasekaran and J. Reno, Size-Dependent Hashing for Credit Card Verification and Other Applications, US Patent 7,020,782, March 28, 2006.

9. S. Rajasekaran, J. Reno, R. Varadarajan, S. Vyas, D.-P. Park, and R. Jerdonek, Enhancements to Multi-Party Authentication and Other Protocols, US Patent 7,111,789, September 26, 2006.

Professional Experience

- Since August 2002, UTC Chair Professor of CSE

- Since January 1, 2005, Director of Booth Engineering Center for Advanced Technology, University of Connecticut.

- August 2000–June 2002, Chief Scientist, Arcot Systems, Santa Clara, CA (on leave from University of Florida).

- August 1999–July 2002, Professor of Computer and Information Science, University of Florida.

- August 1994–July 1999, Associate Professor of Computer and Information Science, University of Florida.

- August 1988–July 1994, Assistant Professor of Computer and Information Science, University of Pennsylvania.

- July–August 1993, Part-time Visiting Scholar, University of Maryland Institute for Advanced Computer Studies.

- July–August 1991, Visiting Scientist, SFB for VLSI-Entwurf und Parallelitäet, University of Saarlandes, Saarbrücken, Germany.

- Member, IEEE Fellows Evaluation Committee for CS, 2010, 2011, 2012, 2013, 2014, 2015.

- Area Editor, IEEE Transactions on Computers, 1996−1999; 2013-2016.

- Area Editor, ACM Computing Surveys, since 2015.

- Subject Area Editor, Journal of Parallel and Distributed Computing, since 1995.

- Editor, Parallel Processing Letters, since 2010.

- Associate Editor, Computing Letters, 2004-2008.

- Area Editor, Journal of Interconnection Networks, 1999-2003.

- Associate Editor, *International Journal of Computers and Their Applications (IJCA)*, 2004-2008.

- Co-editor, Kluwer Series on Biocomputing, 2000-2003.

- Member, IASTED Technical Committee on Biomedical Engineering, 2003-2006.

- General Chair, International Conference on Computational Advances in Bio and medical Sciences (ICCABS), 2015.

- Conference Co-Chair, IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Washington D.C., November 9-12, 2015.

- Program Chair, 14th IEEE International Workshop on High Performance Computational Biology (HiCOMB), May 25, 2015.

- Program Committee Co-Chair, The 14th IEEE Symposium on Signal Processing and Information Technology (ISSPIT), December 2014.

- Steering Committee Chair and General Co-Chair, Fourth IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), 2014.

- Program Committee Co-Chair, 19th IEEE Symposium on Computers and Communications, Madeira, Portugal, June 23-26, 2014.

- Steering Committee Chair and General Co-Chair, Third IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), 2013.

- Steering Committee Chair and General Co-Chair, Second IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), 2012.

- Founder and General Chair, First IEEE International Conference on Computational Advances in Bio and medical Sciences (ICCABS), 2011.

- Advisory Chair, The Second International Conference on Access Networks, Services and Technologies (ACCESS), June 19-24, Luxembourg, 2011.

- Program Co-Chair, International Symposium on Bioinformatics Research and Applications (ISBRA), 2010.

- Founder and General Chair, First International Conference on Bioinformatics and Computational Biology (BICoB), 2009.

- General Chair, The Fourth International Conference on Networks and Communications (NetCom), 2012, Dec. 22-24, Chennai, India.

- General Chair, The First International Workshop on Wireless & Mobile Networks (WiMo-2009), Brisbane, Australia, July 7-10.

- General Chair, The First International Conference on Networks & Communications (NetCom 2009), 27-29 Dec. 2009, Chennai, India.

- Co-Chair, Doctoral Dissertation Consortium, International Conference on High Performance Computing & Simulation (HPCS), Caen, France, June 28-July 2, 2010.

- Co-Chair, Algorithms Track, International Conference on Contemporary Computing, 2008.

- General Chair, Third International Conference on Communication, Network, and Information Security (CNIS), 2006.

- Program Co-Chair, 18th International Conference on Parallel and Distributed Computing Systems (PDCS), 2005.

- Co-Chair, International Workshop on Biomedical Computations on the Grid, 2004, 2005, 2006.

- General Co-Chair, The Third IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), 2003.

- Co-Chair, International Conference on Biocomputing, 2001.

- Co-Chair, Seventh International Workshop on Solving Irregularly Structured Problems in Parallel (IRREGULAR 2000).

- Chair, DIMACS Workshop on Mobile Networks and Computing, March 1999.

- Chair, Workshop on Randomized Parallel Computing, 1996, 1997.

- Co-Chair, Workshop on Randomized Parallel Computing, 1998.

- Vice Chair, Workshop on Routing and Communications Networks, EuroPar 1998.

- Co-Chair, DIMACS Workshop on Randomization Methods in Algorithm Design, Dec. 12 to 14, 1997.

- Panel Member, Internatioal Symposium on Parallel and Distributed Computing Systems (PDCS), 2004.

- Program Committee Member, 17th Workshop on Advances in Parallel and Distributed Computational Models (APDCM), May 2015.

- Program Committee Member, 29th IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 25-29, 2015.

- Program Committee Member, 16th Workshop on Advances in Parallel and Distributed Computational Models (APDCM), 2015.

- 9th International Conference on Language Automata Theory and Applications (LATA), Nice, France, March 2-6, 2015.

- Program Committee Member, 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, August 26-30, 2014.

- Program Committee Co-Chair, The nineteenth IEEE Symposium on Computers and Communications, 2014

- Associated Editor, 36th Annual International IEEE EMBS Conference, August 26-30, 2014, Chicago.

- Program Committee member, the 13th European Conference on Computational Biology (ECCB), 2014.

- Program Committee Member, 16th Workshop on Advances in Parallel and Distributed Computational Models (APDCM), 2013.

- PC Member, 14th Workshop on Advances in Parallel and Distributed Computational Models (APDCM), May 21, 2012, Shanghai, China, in conjunction with IEEE IPDPS.

- PC member, 2nd International Conference on Cloud Computing and Service Science, April 18-21, 2012, Porto, Portugal.

- Program Committee Member, IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Nov. 12 to 15, 2011, Atlanta, GA.

- Program Committee Member, 16th IEEE Symposium on Computers and Communications (ISCC), June 28-July 1, 2011, Kerkyra (Corfu), Greece.

- Program Committee Member, 1st International Conference on Computer Science, Engineering and Applications (CCSEA), Chennai, India, July 15-17, 2011.

- Program Committee Member, First International Conference on Computer Science, Engineering and Information Technology (CCSEIT), September 23-25, Tirunelveli, India, 2011.

- Program Committee Member, IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), Dec. 14-17, Bilbao, Spain, 2011.

- PC Member, IEEE ICC Workshop on Advanced Communications Technologies and Applications for Intelligent Transportation Systems, June 5-9, 2011, Kyoto, Japan.

- Program Committee Member, The First International Conference on Access Networks, Services and Technologies (ACCESS), September 20-25, Valencia, Spain, 2010.

- Program Committee Member, International Forum on Next Generation Multicore/Manycore Technologies (IFMT), 2010.

- Program Committee Member, International Conference on Digital Society (ICDS), 2009, 2010, 2011.

- Program Committee Member, 20th International Symposium on Algorithms and Computation (ISAAC), 2009.

- Program Committee Member, IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2009, 2010, 2011.

- Program Committee Member, 4th International Conference on Internet Monitoring and Protection (ICIMP), 2009.

- Program Committee Member, NEUTRAL 2009 (French Riviera, France)

- Program Committee Member, ISCA 22nd International Conference on Parallel and Distributed Computing and Communication Systems, 2009.

- Program Committee Member, 22nd International Conference on Parallel and Distributed Computing and Communication Systems (PDCCS), Lousville, KY, September 24-26, 2009.

- Program Committee Member, International Symposium on Bioinformatics Research and Applications (ISBRA), 2008, 2009, 2010.

- Program Committee Member, ACM Symposium on Applied Computing (SAC) Special session on Data Mining, 2006, 2007, 2008, 2009, 2010, 2011.

- Program Committee Member, Workshop on Advances in Parallel and Distributed Computational Models (APDCM), 2001, 2002, 2005, 2006, 2007, 2008, 2009, 2010, 2011.

- Program Committee Member, Tenth IEEE Symposium on Computers and Communication (ISCC), 2005, 2006, 2007, 2008, 2009, 2011.

- Program Committee Member, IASTED international conference on Communications and Computer Networks (CCN) 2005, 2006.

- Program Committee Member, International Symposium on Signal Processing and Information Technology (ISSPIT), 2005, 2006, 2008.

- Program Committee Member, International Parallel and Distributed Processing Symposium (IPDPS), 2004, 2005, 2006.

- Program Committee Member, International Conference on Biomedical Engineering (BioMED), 2003, 2004, 2005, 2006, 2008.

- Program Committee Member, Fourth International Conference on Modeling, Simulation, and Optimization, Kuai, Hawaii, August 17-19, 2004.

- Program Committee Member, *Third Workshop on Optics and Computer Science*, 1999.

- Program Committee Member, International Conference on Parallel Processing (ICPP), 2000, 2006.

- Program Committee Member, International Parallel Processing Symposium, 1997, 1998.

- Program Committee Member, International Symposium on Parallel Architectures, Algorithms, and Networks (ISPAN) 1996, 1997, 1998.

- Program Committee Member, Workshop on Interconnection Networks and Communication Algorithms, 1998.

- Program Committee Member, Randomized Algorithms (A sattelite workshop to MFCS), 1998.

- Program Committee Member, International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA), 1996, 1997.

- Program Committee Member, International Conference on Parallel and Distributed Computing and Systems (PDCS), 1998, 2001, 2002, 2003, 2005, 2006, 2007, 2008, 2011.

- Program Committee Member, IEEE Symposium on Parallel and Distributed Processing, 1995.

- Program Committee Member, International Conference on High Performance Computing (HiPC), 1995, 1996, 1997, 2006, 2009.

- Session Chair, International Parallel and Distributed Processing Symposium (IPDPS), 2005.

- Session Chair, International Parallel Processing Symposium, Geneva, Switzerland, April 1997.

- Session Chair, International Parallel Processing Symposium, Newport Beach, CA, April 1993.

- Session Chair, Third IEEE Symposium on Parallel and Distributed Processing, Dallas, Texas, Dec. 1991.

- Made a site-visit on behalf of the US Department of Energy and evaluated a proposal for the DOE SBIR program.

- Referee: SIAM Journal on Computing, Journal of Computer and Systems Science, Information and Computation, Theoretical Computer Science, Algorithmica, Journal of Algorithms, Symposium on Foundations of Computer Science, Symposium on Theory of Computing, Oxford University Press, Prentice Hall Publishers, Conference on Foundations of Software Technology and Theoretical Computer Science, International Conference on Parallel Processing, IEEE Symposium on Parallel and Distributed Processing, IEEE Transactions on Computers, Parallel Processing Letters, Information Processing Letters, International Journal of Parallel Programming, Journal of Parallel and Distributed Computing, ASME Dynamic Systems, and Control Division Technical Papers.

- Reviewer for NSF, 2003, 2004, 2005

- Panel Member, NSF, 2005, 2006, 2010, 2011 (two panels), 2013, 2014 (two panels)

- Reviewer, New York State Technology Transfer Incentive Program, May 2006.

- Panel Member for New York State CART Program

- State of Texas Research Assessment Program (RAP) Review Board member, August 2004.

- Reviewer for the US Department of State Research Program

- Member, External Advisory Board, Dept. of Computer Science, Univ. of New Haven since 2003.

Keynotes and Tutorials

1. Keynote Speech, Fifth International Conference on Bioinformatics and Computational Biology (BICoB), Honolulu, Hawaii, March 4-6, 2013.

2. Keynote Speech, IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), Ho Chi Minh City, Vietnam, December 12-15, 2012.

3. Keynote Speech, International Conference on Advances in Computer Science and Technology (ACST), Langkawi, Malaysia, April 2-4, 2008.

4. Keynote speaker, National Symposium on Bioinformatics, Annamalai University, India, Feb. 23, 2009.

5. Keynote speaker, 4th International Conference on Contemporary Computing (IC3), Noida, India, August 8-10, 2011.

6. Keynote Speaker, First International Conference on Advanced Computing and Communication, September 15-17, 2010, Orlando, Florida.

7. Indo-US Collaboration for Engineering Education (IUCEE) Workshop on Analysis of Algorithms, June 29 to July 3, Mysore, India. Gave a full course on algorithms to 30+ college teachers in India.

8. Tutorial on Sequential and Parallel Algorithms for Motif Search, International Symposium on Bioinformatics Research and Applications (ISBRA), Atlanta, May 8, 2008.

9. Invited Talk, Bio-IT World Conference & Expo, April 12, Boston, 2011.