

### **Research Interests**

Design and Analysis of Algorithms, On-line Scheduling, Computational Biology, Compressed Indexing, Parallel Computing.

### **Research Publications**

#### **On-line Scheduling – Conference Publications**

1. T.W. Lam, L.K. Lee, I. To and P. Wong. Energy efficient deadline scheduling in two processor systems. *International Symposium on Algorithms and Computation (ISAAC)*, 2007.
2. W.T. Chan, T.W. Lam, K.S. Mak and P. Wong. Online Deadline Scheduling with Bounded Energy Efficiency. To appear in the 4th Annual Conference on Theory and Applications of Models of Computation (*TAMC*), 2007.
3. H.L. Chan, W.T. Chan, T.W. Lam, L.K. Lee, K.S. Mak and P. Wong. Energy Efficient Online Deadline Scheduling. In *Proceedings of the Sixteen Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2007.
4. H.L. Chan, T.W. Lam and P. Wong. Efficiency of Data Distribution in BitTorrent-like Systems. In *Proceedings of the Third International Conference on Algorithmic Aspects in Information and Management (AAIM)*, 2007, 378-388.
5. H.L. Chan, T.W. Lam and K.S. Liu. Extra unit speed machines are almost as powerful as speedy machines for competitive flow time scheduling. In *Proceedings of the Sixteen Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2006, pp. 334-343.
6. W.T. Chan, T.W. Lam and W.H. Wong. Dynamic Bin Packing of Unit Fraction Items. In *Proceedings of the 32nd International Colloquium on Automata, Languages and Programming (ICALP)* 2005, 614-626.
7. W.T. Chan, T.W. Lam, K.S. Liu and W.H. Wong. New Resource Augmentation Analysis of the Total Stretch of SRPT and SJF in Multiprocessor Scheduling. In *Proceedings of the 30th International Symposium on Mathematical Foundations of Computer Science (MFCS)* 2005, pp. 236-247.
8. H.L. Chan, T.W. Lam and K.K. To. Non-migratory Online Deadline Scheduling on Multiprocessors. In *Proceedings of the Fifteenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2004, pp. 963-972.
9. T.W. Lam, J. Ngan and K.K. To. Aggressive Online Deadline Scheduling. *Computing: The Australasian Theory Symposium (CATS)* 2004. pp. 240-249.
10. W.T. Chan, T.W. Lam, H.F. Ting and W.H. Wong. New Results on On-demand Broadcasting with Deadline via Job Scheduling with Cancellation. In *Proceedings of*

*the 10th Annual International Conference on Computing and Combinatorics (COCOON)*, 2004. pp. 210-218.

11. W.T. Chan, T.W. Lam, H.F. Ting and W.H. Wong. On-Line Stream Merging, Min Span and Max Coverage. In *Proceedings of the 5th Italian Conference on Algorithms and Complexity (CIAC)*, 2003, pp. 70-82.
12. W.T. Chan, T.W. Lam, H.F. Ting and W.H. Wong. Competitive Analysis of On-line Stream Merging Algorithms. In *Proceedings of the 27th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, 2002, pp. 188-200.
13. C.Y. Koo, T.W. Lam, T.W. Ngan and K.K. To. Extra Processors versus Future Information in Optimal Deadline Scheduling. In *Proceedings of the 14<sup>th</sup> ACM Annual Symposium on Parallel Algorithms and Architectures (SPAA)*, 2002.
14. W.T. Chan, T.W. Lam, H.F. Ting and W.H. Wong. A Unified Analysis of Hot Video Scheduler. In *Proceedings of the 24th Annual Symposium on Theory of Computing (STOC)*, 2002.
15. T.W. Lam and K.K. To, Performance Guarantee for Online Deadline Scheduling in the Presence of Overload. In *Proceedings of the Twelfth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2001, pp. 755-764.
16. W.T. Chan, T.W. Lam, H.F. Ting and W.H. Wong. An  $O(1)$ -Competitive On-line Scheduler for Merging Video Streams. In *Proceedings 15th International Parallel and Distributed Processing Symposium (ISDPS)*, 2001, pp. 2165-2172.
17. T.W. Lam, T.W. Ngan and K.K. To. On the Speed Requirement for Optimal Deadline Scheduling in Overloaded Systems. In *Proceedings 15<sup>th</sup> International Parallel and Distributed Processing Symposium (ISDPS)*, 2001, pp. 2173-2177.
18. W.T. Chan, T.W. Lam, H.F. Ting and WH Wong. Improved On-line Stream Merging: from a Restricted to a General Setting. In *Proceedings of the 7th Annual International Computing and Combinatorics Conference (COCOON)*, 2001. pp. 432-442.
19. C.Y. Koo, T.W. Lam, T.W. Ngan and K.K. To. On-line Scheduling with Tight Deadlines. In *Proceedings of the 26th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, 2001.
20. T.W. Lam and K.K. To. Trade-Offs Between Speed And Processor In Hard-Deadline Scheduling. In *Proceedings of the Tenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 1999, pp. 623-631.
21. K.F. Chan and T.W. Lam. An on-line algorithm for navigating in unknown terrain. In *Proceedings of the 2nd International Symposium on Algorithms, LNCS 557*, 1991, pp. 127-136.

#### **On-line Scheduling – Journal Publications**

22. H.L. Chan, T.W. Lam and K.S. Liu. Extra unit-speed machines are almost as powerful as speedy machines for flow time scheduling. To appear in *SIAM Journal on Computing*.
23. W.T. Chan, T.W. Lam, K.S. Liu and W.H. Wong. New Resource Augmentation Analysis of the Total Stretch of SRPT and SJF in Multiprocessor Scheduling. To appear in *Theoretical Computer Scienc.*

24. W.T. Chan, T.W. Lam, H.F. Ting and W.H. Wong. On-line stream merging with max span and min coverage. *Theory of Computing Systems* (a special issue containing selected papers of *CIAC 03*). Volume 38(4): 461-479 (2005).
25. H.L. Chan, T.W. Lam and K.K. To. Non-migratory Online Deadline Scheduling on Multiprocessors. *SIAM Journal on Computing*. Volume 34(3): 669-682 (2005).
26. T.W. Lam, J. Ngan, K.K. To. A Tighter Extra-Resource Analysis of Online Deadline Scheduling. *Journal of Combinatorial Optimization*. Volume 9(2): 157-165 (2005).
27. T.W. Lam, J. Ngan and K.K. To. Performance Guarantee for EDF under Overload. *Journal of Algorithms*. Volume 52(2): 193-206 (2004).
28. C.Y. Koo, T.W. Lam, J. Ngan and K.K. To. Extra Processors versus Future Information in Optimal Deadline Scheduling. *Theory of Computing Systems* (a special issue containing selected papers of *SPAA 02*). Volume 37: 323-342 (2004).
29. C.Y. Koo, T.W. Lam, J. Ngan, K. Sadakane and K.K. To. On-line Scheduling with Tight Deadlines. *Theoretical Computer Science* (a special issue containing selected papers of *MFCS 01*). Volume 295(1-3): 251-261 (2003) .
30. C.Y. Koo, T.W. Lam, J. Ngan and K.K. To. Competitive Deadline Scheduling via Additional or Faster Processors. *Journal of Scheduling*. Volume 6: 213-223 (2003).
31. W.T. Chan, T.W. Lam, H.F. Ting and W.H. Wong. On-line stream merging in a general setting. *Theoretical Computer Science* (a special issue containing selected papers of *COCOON 01*). Volume 296 (1): 33-47 (2003) .
32. T.W. Lam, H.F. Ting, K.K. To and W.H. Wong. On-line Load Balancing of Temporary Tasks Revisited. *Theoretical Computer Science*. Volume 270(1-2): 325-340 (2002).
33. K.F. Chan and T.W. Lam. An On-line Algorithm for Navigating in an Unknown Environment. *International Journal of Computational Geometry and Applications*. (a special issue containing selected papers of *ISA 91*). Volume 3(3): 227-244 (1993).

### **Bioinformatics/Computational Biology – Conference Publications**

34. Thomas Wong, Y.S. Chiu, Tak-Wah Lam and S.M. Yiu. A Memory Efficient Algorithm for Structural Alignment of RNAs with Embedded Simple Pseudoknots. *5th Asia-Pacific Bioinformatics Conference (APBC)* 2008.
35. T. Wong, T. W. Lam, W. L. Yang and S. M. Yiu. Finding Alternative Splicing Patterns with Strong Support from Expressed Sequences. *International Conference on Bioinformatics and Computational Biology (BIOCOMP)*, 2007.
36. T. Wong, S.M. Yiu, T.W. Lam and S. Wong. Improving the Accuracy of Signal Transduction Pathway Construction using Level-2 Neighbours. The 3<sup>rd</sup> Annual RECOMB Satellite Workshop on Regulatory Genomics. 2006.
37. P.Y. Chan, T.W. Lam, S.M. Yiu and C.Y. Liu. A More Accurate and Efficient Whole Genome Phylogeny. In *Proceedings of the 4th Asia-Pacific Bioinformatics Conference (APBC)*, 2006, pp. 337-352.
38. S.M. Yiu, P.Y. Chan, T.W. Lam, H.F. Ting and W.H. Wong. Allowing mismatches in anchors for whole genome alignment: Generation and effectiveness. In *Proceedings of the 3<sup>rd</sup> Asia-Pacific Bioinformatics Conference (APBC)*, 2005, pp. 1-10.

39. H.L. Chan, J. Jansson, T.W. Lam and S.M. Yiu. Reconstructing an Ultrametric Galled Phylogenetic Network from a Distance Matrix. In *Proceedings of the 30th International Symposium on Mathematical Foundations of Computer Science (MFCS)* 2005.
40. P.Y. Chan, TW Lam and SM Yiu. Verifying Orthologous Paralogenes using Whole Genome Alignment. *International Joint Conference of InCoB, AASBi and KSBI. (BIOINFO-2005)*.
41. F.Y.L. Chin, H.C.M. Leung, S.M. Yiu, T.W. Lam, R. Rosenfeld, W.W. Tsang, D.K. Smith, Y. Jiang. Finding Motifs for insufficient number of sequences with strong binding to transcription factor. In *Proceedings of the 8th Annual International Conference on Research in Computational Molecular Biology (RECOMB)*, 2004, pp. 125-132.
42. H.L. Chan, T.W. Lam, W.K. Sung, W.H. Wong and S.M. Yiu. A Mutation-Sensitive Approach for Locating Conserved Gene Pairs between Related Species. In *Proceedings of the 5th IEEE International Symposium on Bioinformatics and Bioengineering (BIBE)*, 2004, pp. 545-552.
43. T.W. Lam, W.K. Sung, T. Yim and S. M. Yiu. Improving the Efficiency and Accuracy of Aligning Erroneous mRNAs. In *ALBIO (Algorithms in Molecular Biology)*, 2004.
44. P. Wong, T.W. Lam, Y.C. Mui, S.M. Yiu, H.F. Kung and M Lin. Filtering of ineffective siRNAs and improved siRNA design Tool. In *Proceedings of the Asia Pacific Bioinformatics Conference (APBC)*, 2004, pp. 247-255.
45. F.Y.L. Chin, N.L. Ho, T.W. Lam and W.H. Wong. Efficient Constrained Multiple Sequence Alignment with Performance Guarantee. In *Proceedings of the 2nd IEEE Computer Society Bioinformatics Conference (CSB)*, 2003, pp. 337-346.
46. T.W. Lam, N. Lu, H.F. Ting, W.H. Wong and S.M. Yiu. Efficient Algorithms for Optimizing Whole Genome Alignment with Noise. In *Proceedings of the Fourteen Annual International Symposium on Algorithms and Computation (ISAAC)*, 2003, pp. 362-374.
47. S. Jeong, M.Y. Kao, T.W. Lam, W.K. Sung and S.M. Yiu. Predicting RNA Secondary Structures with Arbitrary Pseudoknots by Maximizing the Number of Stacking Pairs. In *Proceedings of the 2nd IEEE International Symposium on Bioinformatics and Bioengineering (BIBE)*, 2001, pp. 183-190.
48. M.Y. Kao, T.W. Lam, W.K. Sung and H.F. Ting. A Faster and Unifying algorithm for Comparing Trees. In *Proceedings of the 11th Annual Symposium on Combinatorial Pattern Matching (CPM)*, 2000, pp. 129-142.
49. W.K. Hon, M.Y. Kao and T.W. Lam. Improved Phylogeny Comparisons: Non-Shared Edges, Nearest Neighbor Interchanges and Subtree Transfers. In *Proceedings of the 11th Annual International Symposium on Algorithms and Computation (ISAAC)*, 2000, pp. 527-538.
50. M.Y. Kao, T.W. Lam, W.K. Sung and H.F. Ting. Unbalanced and Hierarchical Bipartite Matchings with Applications to Labeled Tree Comparison. In *Proceedings of the 11<sup>th</sup> Annual International Symposium on Algorithms and Computation (ISAAC)*, 2000, pp. 479-490.

51. M.Y. Kao, T.W. Lam, W.K. Sung and H.F. Ting. A Decomposition Theorem for Maximum Weight Bipartite Matchings with Applications To Evolutionary Trees. In *Proceedings of the European Symposium on Algorithms (ESA)*, 1999, pp. 438-449.
52. W.K. Hon and T.W. Lam. Approximating the Nearest Neighbor Interchange Distance for Evolutionary Trees With Non-Uniform Degrees. In *Proceedings of the 5th Annual International Computing and Combinatorics Conference (ISAAC)*, 1999, pp. 61-70.
53. M.Y. Kao, T.W. Lam, T. Przytycka, W.K. Sung and H.F. Ting. General Techniques for comparing unrooted evolutionary trees. In *Proceedings of the Twenty Ninth Annual ACM Symposium on Theory of Computing (STOC)*, 1997, pp. 54-65.
54. T.W. Lam, W.K. Sung, H.F. Ting. Computing the unrooted maximum agreement subtree in sub-quadratic time. In *Proceedings of the fifth Scandinavian Workshop on Algorithm Theory (SWAT)*, 1996, pp. 124-135.

### **Bioinformatics/Computational Biology – Journal Publications**

55. H L Chan, T W Lam, W K Sung, Prudence Wong and S M Yiu. Non-overlapping Common Substrings Allowing Mutations. *Mathematics in Computer Science (MCS)*. To appear.
56. S.M. Yiu, P.Y. Chan, T.W. Lam, H.F. Ting and W.H. Wong. Allowing Mismatches in Anchors for Whole Genome Alignment. *WSEAS Transactions on WSEAS Transactions on Biology and Biomedicine*. To appear.
57. Thomas Wong, T.W. Lam, P.Y. Chan, Siu Ming Yiu. Correcting Short Reads with High Error Rates for Improved Sequencing Result. *International Journal of Bioinformatics Research and Applications*. To appear.
58. PY Chan, TW Lam, CM Liu and SM Yiu. A method to construct phylogeny from whole genome alignment. *Online Journal of Bioinformatics*. Volume 8 (2): 165-178, 2007.
59. H.L. Chan, J. Janson, T.W. Lam and S.M. Yiu. Reconstructing an Ultrametric Galled Phylogenetic Network from a Distance Matrix. *Journal of Bioinformatics and Computational Biology*. To appear.
60. S.M. Yiu, P. Wong, T.W. Lam, Y.C. Mui, H.F. Kung and M Lin. Filtering of ineffective siRNAs and improved siRNA design Tool. *Bioinformatics*. Volume 21(2): 144-151 (2005).
61. F.Y.L. Chin, N.L. Ho, T.W. Lam and W.H. Wong. Efficient Constrained Multiple Sequence Alignment with Performance Guarantee. *Journal of Bioinformatics and Computational Biology*. Volume 3(1): 1-18 (2005).
62. H.L. Chan, T.W. Lam, W.K. Sung, P. Wong, S.M. Yiu and X. Fan. The Mutated Subsequence Problem and Locating Conserved genes. *Bioinformatics*. Volume 21(10): 2271-2278 (2005).
63. W.K. Hon, M.Y. Kao, T.W. Lam, W.K. Sung and S.M. Yiu. Non-shared edges and nearest neighbor interchanges revisited. *Information Processing Letters*. Volume 91(3): 129-134 (2004).
64. W.H. Wong, T.W. Lam, N. Lu, H.F. Ting, S.M. Yiu. An Efficient Algorithm for Optimizing Whole Genome Alignment with Noise. *Bioinformatics*. Volume 20 (16): 2676-2684 (2004).

65. T.W. Lam, W.K. Sung, T. Yim and S.M. Yiu. Improving the Efficiency and Accuracy of aligning Erroneous mRNAs. *WSEAS Transactions on Systems*. Volume 4(3): 1469-1473 (2004).
66. W.K. Hon, M.Y. Kao, T.W. Lam, W.K. Sung and S.M. Yiu. Subtree Transfer Distance for Degree-d Phylogenies. *International Journal of Foundations of Computer Science*. Volume 15(6): 893-909 (2004).
67. S. Jeong, M.Y. Kao, T.W. Lam, W.K. Sung and S.M. Yiu. Predicting RNA Secondary Structures with Arbitrary Pseudoknots by Maximizing the Number of Stacking Pairs. *Journal of Computational Biology*. Volume 10(6): 997-1010 (2003).
68. M.Y. Kao, T.W. Lam, W.K. Sung and H.F. Ting. A Decomposition Theorem for Maximum Weight Bipartite Matchings. *SIAM Journal on Computing*. Volume 31(1), 18-26 (2001).
69. M.Y. Kao, T.W. Lam, W.K. Sung and H.F. Ting. An Even Faster and More Unifying Algorithm for Computing Trees via Unbalanced Bipartite Matchings. *Journal of Algorithms*. Volume 40(2): 212-233 (2001).
70. W.K. Hon and T.W. Lam. Approximating the Nearest Neighbor Interchange Distance for Non-Uniform-Degree Evolutionary Trees. *International Journal of Foundations of Computer Science*. Volume 12(4): 533-550 (2001).
71. M.Y. Kao, T.W. Lam, W.K. Sung and H.F. Ting. Cavity Matchings, Label Compressions and Unrooted Evolutionary Trees. *SIAM Journal on Computing*. Volume 30(2), 602-624 (2000).
72. T.W. Lam, W.K. Sung and H.F. Ting. Computing the Unrooted Maximum Agreement Subtree in Sub-quadratic Time. *Nordic Journal of Computing* (a special issue containing selected papers of SWAT 96). Volume 3: 295-322 (1996).

#### **Data Structures & Compressed Text Indexing – Conference Publications**

73. W.K. Hon, T.W. Lam, R. Shah, S.L. Tam, and J. Vitter. Compressed Index for Dictionary Matching. *DCC* 2008, pp. 23-32.
74. T.W. Lam, S.L. Tam, W.K. Sung and S.M. Yiu. Space Efficient Indexes for String Matching with Don't Cares. *ISAAC* 2007.
75. W.K. Hon, T.W. Lam, R. Shah, S.L. Tam, and J. Vitter. Cache-Oblivious Index for Approximate String Matching. *CPM* 2007.
76. H.L. Chan, T.W. Lam, W.K. Sung, S.L. Tam, S.S. Wong. Compressed Indexes for Approximate String Matching. *ESA* 2006, *LNCS* 4168, pp. 208-219.
77. H.L. Chan, T.W. Lam, W.K. Sung, S.L. Tam and S.S. Wong. A Linear Size Index for Approximate Pattern Matching. In *Proceedings of the 17<sup>th</sup> Annual Symposium on Combinatorial Pattern Matching (CPM)*, 2006, *LNCS* 4009, pp. 49-59.
78. H.L. Chan, W.K. Hon, T.W. Lam and K. Sadakane. Dynamic Dictionary Matching and Compressed Suffix Trees. In *Proceedings of the Fifteenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2005, pp. 13-22.

79. T.W. Lam, W.K. Sung and S.S. Wong. Improved approximate string matching using compressed suffix data structures. In *Proceedings of the 16th International Symposium Algorithms and Computation (ISAAC)*, LNCS 3827, 2005, pp. 339-348.
80. H.L. Chan, W. Hon and T.W. Lam. Compressed Index for a Dynamic Collection of Texts, In *Proceedings of the 15th Annual Symposium on Combinatorial Pattern Matching (CPM)*, 2004. pp. 446-457, pp. 210-218.
81. W.K. Hon, T.W. Lam, W.K. Sung, W.L. Tse, C.K. Wong and S.M. Yiu. Practical Aspects of Compressed Suffix Arrays and FM-index in Searching DNA Sequences. In *Proceedings of the 6th Workshop on Algorithm Engineering and Experiments (ALENEX)*, 2004, pp. 31-38.
82. W.K. Hon, T.W. Lam, K. Sadakane, W.K. Sung and S.M. Yiu. Compressed Index for dynamic text. In *Proceedings of the 2004 Data Compression Conference (DCC)*, IEEE Computer Society, pp. 102-111.
83. Huynh, W.K. Hon, T.W. Lam and W.K. Sung. Approximate String Matching using Compressed Suffix Arrays. In *Proceedings of the 15th Annual Symposium on Combinatorial Pattern Matching (CPM)*, 2004, pp. 434-445.
84. W.K. Hon, T.W. Lam, K. Sadakane and W.K. Sung. Constructing Compressed Suffix Arrays with Large Alphabets. In *Proceedings of the Fourteen Annual International Symposium on Algorithms and Computation (ISAAC)*, 2003, pp. 240-249.
85. T.W. Lam, K. Sadakane, W.K. Sung and S.M. Yiu. A Space and Time efficient Algorithm for Constructing Compressed Suffix Arrays. In *Proceedings of the 8th Annual International Computing and Combinatorics Conference (COCOON)*, 2002, pp. 401-410.
86. C.F. Chong, K.P. Chow and T.W. Lam. Very Fast Telephone Directory Search Using Memory Resident Data Structures. In *Proceedings of IASTED Conference on Software Engineering*, Las Vegas, 1998, pp. 94-98.
87. Y. Choi and T.W. Lam. Two-dimensional dynamic dictionary matching. In *Proceedings of the 7th International Symposium on Algorithms and Computation (ISSAC)*, 1996, pp. 88-94.
88. T.W. Lam and K.K. To. Dynamic Dictionary Matching Revisited. In *Proceedings of ICS'96 - International Conference on Algorithms*, 1996, pp. 169-174.
89. K.P. Chow, T.W. Lam and K.H. Lee. The Hong Kong Telephone Enquiry System. In *Proceedings of the Asia-Pacific Software Engineering Conference*, 1996, pp. 268-275.
90. Y. Choi and T.W. Lam. Two-dimensional pattern matching on a library of texts. In *Proceedings of the 1st Annual International Computing and Combinatorics Conference (COCOON)*, 1995, pp. 530-539.
91. T.W. Lam and K.H. Lee. Efficient equality testing and updating of sets. In *Proceedings of the Asian Computer Science Conference*, LNCS 1023, 1995, pp. 48-58.
92. T.W. Lam and K.H. Lee. On Set Equality-Testing. In *Proceedings of the Second Italian Conference on Algorithms and Complexity (CIAC)*, LNCS 778, 1994, pp. 179-191.

93. T.W. Lam and K.H. Lee. The implicit dictionary problem revisited. In *Proceedings of the 3rd International Symposium on Algorithms and Computation (ISAAC)*, LNCS 650, 1992, pp. 479-488.

#### **Data Structures & Compressed Text Indexing - Journal Publications**

94. W.K. Hon, T.W. Lam, K. Sadakane, W.K. Sung and S.M. Yiu. A Space and Time Efficient Algorithm for Constructing Compressed Suffix Arrays. *Algorithmica*. To appear.
95. T.W. Lam, W.K. Sung and S.S. Wong. Improved Approximate String Matching using Compressed Suffix Data Structures. *Algorithmica*. To appear.
96. H.L. Chan, W.K. Hon, T.W. Lam and K. Sadakane. Compressed Indexes for Dynamic Text Collections. *ACM Transactions on Algorithms*. To appear.
97. T.N.D. Huynh, W.K. Hon, T.W. Lam and W.K. Sung. Approximate Substring Matching Using Compressed Suffix Arrays. *Theoretical Computer Science*. Volume 352(1-3): 240-249 (2006).
98. T.W. Lam and K.H. Lee. An Improved Scheme for Set Equality-Testing and Updating. *Theoretical Computer Science*. Volume 201(1-2): 85-97 (1998).
99. Y. Choi and T.W. Lam. Dynamic Suffix Tree and Two-dimensional Texts Management. *Information Processing Letters*. Volume 61(4): 213-220 (1997).

#### **Parallel and Distributed Computing – Conference Publications**

100. K.W. Chong, Y. Han and T.W. Lam. On The Parallel Time Complexity Of Undirected Connectivity And Minimum Spanning Trees. In *Proceedings of the 10<sup>th</sup> Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 1999, pp. 225-234.
101. K.W. Chong, Y. Han, Y. Igarashi and T.W. Lam. Improving Parallel Computation with Fast Integer Sorting. In *Proceedings of the 5th Annual International Computing and Combinatorics Conference (COCOON)*, 1999, pp. 452-461.
102. K.W. Chong and T.W. Lam. Improving Biconnectivity Approximation via Local Optimization. In *Proceedings of the 7th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 1996, pp. 26-35.
103. K.W. Chong and T.W. Lam. Towards more precise parallel biconnectivity approximation. In *Proceedings of the 7th International Symposium on Algorithms and Computation (ISSAC)*, 1996, pp. 223-232.
104. K.W. Chong and T.W. Lam. Approximating biconnectivity in parallel. In *Proceedings of the 7th Annual ACM Symposium on Parallel Algorithms and Architectures (SPAA)*, 1995, pp. 224-233.
105. K.W. Chong and T.W. Lam. Improved parallel algorithms for finding connected components. In *Proceedings of the IEEE International Conference on Algorithms and Architectures for Parallel Processing*, 1995, pp. 452-459.
106. K.W. Chong and T.W. Lam. Finding Connected Components in  $O(\log n \log \log n)$  Time on the EREW PRAM. In *Proceedings of the fourth ACM-SIAM Symposium on Discrete Algorithms (SODA)*, Austin, Texas, 1993, pp. 11-20.

107. K.F. Chan and T.W. Lam. Finding least-weight subsequences with fewer processors. In *Proceedings of SIGAL International Symposium on Algorithms, LNCS 450*, 1990, pp. 318-327.
108. T.W. Lam, M. Tompa and P. Tiwari. Tradeoffs between communication and space. In *Proceedings of the 21st Annual ACM Symposium on Theory of Computing (STOC)*, 1989, pp. 217-226.
109. T.W. Lam and W.L. Ruzzo. Results on communication complexity classes. In *Proceedings of the 4th Annual Conference on Structure in Complexity Theory*, 1989, pp. 148-157.
110. T.W. Lam and W.L. Ruzzo. The power of parallel pointer manipulation, *Proceedings of the First Annual ACM Symposium on Parallel Algorithms and Architectures (SPAA)*, 1989, pp. 318-327.
111. W.W. Tsang, T.W. Lam and F.Y.L. Chin. An optimal EREW parallel algorithm for parenthesis matching. In *Proceedings of the 18th International Conference on Parallel Processing (ICPP)*, 1989, pp. 185-192.
112. F.Y.L. Chin, W.W. Tsang and T.W. Lam. Efficient Parallel Algorithms for some subsequence problems. In *Proceedings of the First Annual IEEE Symposium on Parallel and Distributed Processing*, 1989.

#### **Parallel and Distributed Computing – Journal Publications**

113. K.W. Chong, Y. Han, Y. Igarashi and T.W. Lam. Improving the Efficiency of Parallel Minimum Spanning Tree Algorithms. *Discrete Applied Mathematics*. Volume 126(1): 33-54 (2003).
114. K.W. Chong, Y. Han and T.W. Lam, Concurrent Threads and Optimal Parallel Minimum Spanning Tree Algorithm. *Journal of the ACM*, volume 48(2), 2001, 297-323.
115. K.W. Chong and T.W. Lam. Approximating Biconnectivity in Parallel. *Algorithmica*. Volume 21, 1998, 395-410.
116. K.W. Chong and T.W. Lam, Finding Connected Components in  $O(\log n \log \log n)$  Time on the EREW PRAM. *Journal of Algorithms* (a special issue containing selected papers of SODA 93). Volume 18, 1995, 378-402.
117. T.W. Lam and K.F. Chan. Finding Least-weight Subsequences with Fewer Processors. *Algorithmica*. Volume 9, 1993, 615-628.
118. T.W. Lam and W.L. Ruzzo. Results on Communication Complexity Classes. *Journal of Computer and System Sciences* (a special issue containing selected papers of the 4th Annual Conference on Structure in Complexity Theory). Volume 44(2), 1992, 324-342.
119. T.W. Lam, M. Tompa and P. Tiwari. Tradeoffs between Communication and Space. *Journal of Computer and System Sciences*. Volume 45(3), 1992, 296-315.

#### **Other Conference Publications**

120. T.W. Lam and F.L. Yue. Optimal Edge Ranking of Trees in Linear Time. In *Proceedings of the Ninth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 1998, pp. 436-445.
121. M.Y. Kao, T.W. Lam, W.K. Sung and H.F. Ting. Default-Sensitive Preprocessing for Finding Maxima. In *Proceedings of the Australasian Theory Symposium on Computing*, 1998, pp. 107-120.
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