

Kevin J. Liu

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Research Interests

Computational biology: computational phylogenetics, especially simultaneous alignment and phylogeny estimation, multiple sequence alignment.

Metagenomics.

Algorithm design and empirical performance studies.

Education

Ph.D. Computer Science, University of Texas at Austin, 2004–completion expected 2010.

DISSERTATION: Fast and Accurate Co-estimation of Phylogenetic Alignments and Trees, in progress

B.S. Computer Science, Carnegie Mellon University, 1997–2000.

University Honors

Research

Refereed Journal and Conference Publications

1. K. Liu, S. Raghavan, S. Nelesen, C. R. Linder, T. Warnow, "Rapid and Accurate Large-Scale Coestimation of Sequence Alignments and Phylogenetic Trees," *Science*, vol. 324, no. 5934, pp. 1561-1564, 19 June 2009, doi: 10.1126/science.1171243.
2. K. Liu, S. Nelesen, S. Raghavan, C. R. Linder, T. Warnow, "Barking Up The Wrong Tree-length: The Impact of Gap Penalty on Alignment and Tree Accuracy," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 6, no. 1, pp. 7-21, Jan.-Mar. 2009, doi:10.1109/TCBB.2008.63.
3. S. Nelesen, K. Liu, D. Zhao, C. R. Linder, T. Warnow, "The Effect of the Guide Tree on Multiple Sequence Alignments and Subsequent Phylogenetic Analyses," *Pacific Symposium on Biocomputing*, vol. 13, pp. 15-24, 2008.

Scientific Software

SATé, a method for simultaneous maximum likelihood estimation of alignments and trees, with Sindhu Raghavan, Serita Nelesen, C. R. Linder, and Tandy Warnow. (2009).

Academic Experience

University of Texas at Austin, Department of Computer Science

Research Assistant, Professor Tandy Warnow, Spring 2006–present.

Teaching Assistant, CS 394C Algorithms for Computational Biology, Fall 2009.

Teaching Assistant, CS 329E Elements of Ethics in Computer Science, Fall 2005.

Carnegie Mellon University, School of Computer Science

Student programmer, Project LISTEN, 1997–1998.

Industry Experience

Software developer I, Oracle Corporation, 2001–2004.

Software engineer I, Smartpipes Corporation, 2001.

Intern, Oracle Corporation, summer 2000.

Intern, Fujitsu Network Communications, summer 1999.

Intern, UHD Inc., contractor at National Institutes of Health. summer 1998.

Professional Activities

University Service

Student member of Faculty Recruiting Committee, Department of Computer Science, University of Texas at Austin, 2008.

Co-chair of Student Faculty Recruiting Committee, Department of Computer Science, University of Texas at Austin, 2008.

Honors & Awards

Fellowships

University of Texas Office of Graduate Studies Professional Development Award, Fall 2007.

Microelectronics and Computer Development Doctoral Fellowship, 2004–2005.

Shell Merit Scholarship, 1997–2000.

Andrew Carnegie Merit Scholarship, 1997–2000.

Junior Achievement Merit Scholarship, 1998.

Chinese Professionals Club Merit Scholarship, 1997.

Society of Automotive Engineers Merit Scholarship, 1997.

Awards

NSF Graduate Fellowship Honorable Mention.

University of Texas Dean's Excellence Award.

National Merit Competition Finalist.

References

Available upon request.