

SERDAR BOZDAG

bozdags@mail.nih.gov

QUALIFICATIONS SUMMARY

- Extensive implementation skills in C++, Java, C, and Perl.
- Knowledge of R, MATLAB, MySQL, Python, Graphviz, Gnuplot, and Subversion.
- Knowledge of sequence alignment, next-generation sequencing, genome assembly algorithms, SNP, physical mapping, optical mapping, restriction digestion, FingerPrinted Contigs (FPC), BLAST, etc.
- Keen problem solving and analytical skills.

EDUCATION

- PhD in Computer Science**, University of California, Riverside, CA, USA *Sep 2003 – Aug 2008*
- BS in Computer Engineering**, Marmara University, Istanbul, Turkey *Sep 1998 – June 2002*

ACADEMIC / TEACHING EXPERIENCE

Postdoctoral Fellow, Neuro-Oncology Branch, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA *Oct 2008 – Present*

Graduate Research Assistant, Department of Computer Science and Engineering, University of California, Riverside, CA, USA *Sep 2005 – Aug 2008*

- Designing and implementing algorithms to construct optimized physical maps from fingerprinted clones.
- Designing and implementing software to compute the minimal tiling path of physical maps.
- Performing statistical analysis of probe-BAC hybridization data.
- Analyzing the distribution of genes in the genomes of rice and *Arabidopsis*.

Teaching Assistant, Department of Computer Science and Engineering, University of California, Riverside, CA, USA *Sep 2003 – June 2005*

- Courses taught
 - Intermediate Data Structures and Algorithms (3 quarters)
 - Principles of Programming Languages
 - Textual Databases Design Project

INDUSTRIAL EXPERIENCE

Software Engineer, Mobipath, Istanbul, Turkey *Feb 2002 – June 2003*

- Designed and implemented software based on wireless communication technologies, such as GSM, GPRS, and GPS.
- Actively involved in project management.

Software Engineering Intern, Arcelik AS, Istanbul, Turkey *June 2000 – Aug 2000*

- Implemented software to efficiently compute the annual financial report of the company, which has over 11,000 employees worldwide.

PUBLICATIONS

- **S. Bozdag**, T. J. Close, S. Lonardi, “Computing the minimal tiling path from a physical map by integer linear programming”, Proceedings of *Workshop on Algorithms in Bioinformatics (WABI'08)*, pp 148-161.
- **S. Bozdag**, T. J. Close, S. Lonardi, “A compartmentalized approach to the assembly of physical maps”, Proceedings of IEEE International Symposium on Bioinformatics & Bioengineering (BIBE'07), pp. 218-225, Boston, MA, 2007 (acceptance rate: 13%).
- **S. Bozdag**, T. J. Close, S. Lonardi, “A pre-clustering approach to the assembly of physical maps”, *submitted*.
- **S. Bozdag**, T. J. Close, S. Lonardi, “The distribution of genes and its correlation to GC content in the genomes of *Oryza sativa* and *Arabidopsis thaliana*”, *in preparation*.
- K. Madishetty, P. Condamine, **S. Bozdag**, M. Moscou, J. Svensson, J. Zheng, S. Wanamaker, P. Bhat, E. Rodriguez, H. Walia, J. Resnik, H. Le, M. C. Luo, T. Jiang, S. Lonardi, H. Witt, F. You, A. Kleinhofs, N. Stein, L. Cooper, K. Gill, G. Muehlbauer, R. Wise, T. J. Close, “Towards a physical map of the barley gene space”, *in preparation*.

ABSTRACTS / POSTERS

- T. J. Close, S. Lonardi, M.C. Luo, J. Dolezel, P. Bhat, K. Madishetty, J. T. Svensson, J. Zheng, Y. Wu, **S. Bozdag**, J. Resnik, S. Wanamaker, R.D. Fenton, M. Moscou, P. Condamine, E. L Rodriguez, M. L. Roose, Y. Ma, F. You, J. Bartos, H. Simkova, N. Rostoks, L. Ramsay, D.F. Marshall, R. Waugh, N. Stein, A. Graner, R. Varshney, K. Sato, R. Wing, A. Schulman, ..., B. Steffenson, “Coupling ESTs, SNPs, BACs, Mapping Populations, Flow-Sorting And Synteny To Access The Barley Genome”, Poster in *Plant and Animal Genomes XVII Conference, 2009*
- **S. Bozdag**, T. J. Close, S. Lonardi, “A Compartmentalized Approach to the Assembly of the Physical Maps”, Poster in *Plant and Animal Genomes XVI Conference, 2008*.
- Y. Ma, H. Witt, R. Naderi, F. M. You, C. X. Wang, K. Madishetty, J. T. Svensson, J. Zheng, P. Condamine, R. Ashgar, S. Wanamaker, P. Bhat, M. Moscou, E. Rodriguez, H. Walia, J. Resnik, **S. Bozdag**, G. J. Muehlbauer, S. Lonardi, T. J. Close, M.C. Luo, “Updates on Contig Assembly with Gene-Containing BACs of Barley”, Poster in *Plant and Animal Genomes XVI Conference, 2008*.
- K. Madishetty, P. Condamine, M. Moscou, J. T. Svensson, J. Zheng, S. Wanamaker, P. Bhat, E. Rodriguez, H. Walia, **S. Bozdag**, J. Resnik, H. Le, S. Heinen, G. H. Muehlbauer, M.C. Luo, T. Jiang, S. Lonardi, H. Witt, F. You, T. J. Close, “Progress on physical mapping of the gene-space of barley”, Abstract in *Plant and Animal Genomes XV Conference, 2007*.
- Y. Ma, H. Witt, R. Naderi, F. M. You, C. X. Wang, K. Madishetty, J. T. Svensson, J. Zheng, P. Condamine, R. Ashgar, S. Wanamaker, P. Bhat, M. Moscou, E. Rodriguez, H. Walia, J. Resnik, **S. Bozdag**, G. J. Muehlbauer, S. Lonardi, T. J. Close, M.C. Luo, “Contig assembly of gene-containing BACs of barley”, Poster in *Plant and Animal Genomes XV Conference, 2007*.
- J. T. Svensson, K. Madishetty, J. Zheng, Jin Xu, P. Condamine, R. Ashgar, S. Wanamaker, P. Bhat, M. Moscou, E. Rodriguez, H. Walia, J. Resnik, H. Le, **S. Bozdag**, H. Witt, F. You, N. Rostoks, R. Waugh, N. Stein, R. Varshney, A. Graner, M.C. Luo, X. Cui, T. Jiang, S. Lonardi, T. J. Close, “Connecting the barley genetic and physical maps for 1000 abiotic stress genes”, Abstract in *Plant and Animal Genomes XIV Conference, 2006*.

INVITED TALKS

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- “Combinatorial approaches to the physical mapping problem”, Center for Plant Cell Biology (CEPCEB) Seminar Series, University of California, Riverside, CA, USA. *June 2008*
 - “Assembly of physical maps from fingerprinted clones”, Department of Computer Engineering, Marmara University, Istanbul, Turkey. *March 2006*

AWARDS & HONORS

- **Visiting Fellowship**, National Institutes of Health, Bethesda, MD, USA. *Oct 2008 - Present*
- **Graduate Student Association Mini Grant**, University of California, Riverside, CA, USA. *2007*
- **Outstanding Teaching Assistant Award**, University of California, Riverside, CA, USA. *2004*
- **Dean’s Fellowship**, Department of Computer Science and Engineering, University of California, Riverside, CA, USA. *Sep 2003 – June 2005*
- **Graduate Research Scholarship**, Türkipetrol Foundation, Istanbul, Turkey. *2003*
- **Undergraduate Education Fellowship**, Finance Bank Foundation, Istanbul, Turkey. *Sep 1998 – June 2002*

UNIVERSITY SERVICE

- **Chair**, Algorithms and Computational Lab Journal Club, University of California, Riverside, CA, USA. *Jan 2006 – April 2007*

COMMUNITY SERVICE

- **Founder and vice president** of Turkish Student Association (TSA) Student Club, University of California, Riverside, CA, USA. *Jan 2006 – Aug 2008*

PROFESSIONAL SERVICE

- **Reviewer**, Nucleic Acids Research (NAR), Oct 2008.
- **Reviewer**, ICDM’08: IEEE International Conference on Data Mining, Pisa, Italy.
- **Reviewer**, Nucleic Acids Research (NAR), July 2008.
- **Reviewer**, WABI’08: Workshop on Algorithms in Bioinformatics, Universität Karlsruhe, Germany.
- **Reviewer**, CSB’08: Computational Systems Bioinformatics Conference, Stanford, CA.
- **Reviewer**, SDM’08: SIAM Conference on Data Mining, Atlanta, GA.
- **Reviewer**, WABI’07: Workshop on Algorithms in Bioinformatics, Philadelphia, PA.
- **Reviewer**, SMD’07: SIAM Conference on Data Mining, Minneapolis, MN.
- **Reviewer**, SMD’06: SIAM Conference on Data Mining, Bethesda, MD.
- **Reviewer**, ICTAI’05: IEEE International Conference on Tools with Artificial Intelligence, Hong Kong.

REFERENCES

Available upon request.