

## **Weijia Xu, Ph.D.**

Texas Advanced Computing Center  
The University of Texas at Austin  
Austin, Texas, USA

### **Professional Preparation**

Peking University	Biochemistry & Molecular Biology	B.S.	1998
University of Texas at Austin	Biological Sciences	M.A.	2001
University of Texas at Austin	Computer Sciences	M.S.	2003
University of Texas at Austin	Computer Sciences	P.h.D.	2006

### **Appointments**

Apr. 2007-present	Research Associate, Data and Information System, Texas Advanced Computing Center, University of Texas at Austin, Austin, TX
Sep. 2005-Mar. 2007	Research Engineering & Science Associate II, Department of Computer Science, University of Texas at Austin, Austin, TX
Jan. 2002-Aug. 2005	Research Assistant, Department of Computer Science, University of Texas at Austin, Austin, TX

### **Five Most Relevant Publications**

1. **Xu, W.**, Ozer, S., Gutell R. R. Covariant Evolutionary Event Analysis for Base Interaction Prediction using Relational Database Management System for RNA *in proceeding of 21st International Conference on Scientific and Statistical Database Management*, New Orleans, USA, p.p 200-216, June 2-4 2009
2. **Xu, W.**, Miranker, D.P., Ramakrishnan, S., Mao, R., and Willard, W. Anytime K-Nearest Neighbor Search for Database Applications. *In the proceedings of the 1<sup>st</sup> international Workshop on similarity on Similarity Search and Applications (SISAP 08) in conjunction with 24th International Conference on Data Engineering*, Cacun, Mexcio, April 7-12 pp.139-148 2008
3. **Xu. W.**, Miranker, D.P., Mao, R., & Wang, S. On Integrating Peptide Sequence Analysis and Relational Distance-Based Indexing *to appear in the Proceedings of 6<sup>th</sup> IEEE Symposium on Bioinformatics and Bioengineering*, 2006 Arlington, VA, USA Oct.16-18, PP27-34
4. **Xu, W.**, Briggs, W. J., Padolina, J., Liu, W., Linder, C. R. & Miranker, D.P. Using MoBIoS' Scalable Genome Joins to Find Conserved Primer Pair Candidates Between Two Genomes, *Bioinformatics* 2004 20:I355-I362
5. **Xu, W.** & Miranker, D.P. A Metric Model of Amino Acid Substitution, *Bioinformatics*. 2004 22;20(8):1214-21

### **Five Other Relevant Publications**

1. Esteva, M., **Xu, W**, Sreevelsan-Nair, J., Athalye, A., Hade, M. Finding Narratives of activities through archival bond in electronically stored information (ESI) *in DESI III*

*Global E-Discovery/E-Disclosure Workshop at the 12th International Conference on Artificial Intelligence and Law, Casa Convalescència, Barcelona, Spain, June 8, 2009*

2. **Xu, W.** and Sreevalsan-Nair, J. Visual Representation of Multiple Associations in Data using Constrained Graph Layout *to appear in the seventh Theory and Practice of Computer Graphics 2009 Conference, Cardiff University, UK, 17-19 June 2009*
3. Ramakrishnan, S.R., Mao, R. Nakorchevskiy, A.A., Prince, J.T., Willard, W.S., **Xu, W.**, Marcotte, E.M. and Miranker, D.P. A fast coarse filtering method for protein identification by mass spectrometry *Bioinformatics* 22 (12): 1524 2006
4. Mao, R., **Xu, W.**, Singh, N. & Miranker, D.P. "An Assessment of a Metric Space Database Index to Support Sequence Homology". *International Journal on Artificial Intelligence Tools*, Vol. 14, No. 5 (2005) 867-885, October 2005.
5. Mao, R., **Xu, W.**, Ramakrishnan, S., Nuckolls, G. and Miranker, D.P. On Optimizing Distance-Based Similarity Search for Biological Databases *In the Proceedings of the 2005 IEEE Computational Systems Bioinformatics Conference, August 8-11, 2005, Stanford University, California, USA*

### **Synergistic Activities**

- Management, development and service activities for scientific data collections at the Texas Advanced Computing Center.
- Collaboration with researchers on database, data mining and bioinformatics in University of Texas at Austin.
- Reviewer for the International Workshop on Similarity Search and Applications (SISAP), 2008-2009
- Co-PI for "Enabling Transformational Science and Engineering Through Integrated Collaborative Visualization and Data Analysis for the National User Community", NSF award OCI-0906379, 2009-
- Co-PI for "Computational Foundation for Comparative RNA Sequence and Structure Analysis", NIH award (R01), GM085337, 2008-
- Presenter for "rCAD: RNA Comparative Analysis Database" at Microsoft eScience workshop at RENCI Oct.21~23 2007
- George H. Mitchell/University Co-Op Awards for Excellence in Graduate Research, Apr. 2004

### **Collaborators and Other Affiliations – Last 5 Years**

#### *Collaborators and Co-Editors*

Ron Elber (The University of Texas at Austin), Robin Gutell (The University of Texas at Austin), C Randy Linder (The University of Texas at Austin), Rui Mao (Oracle Inc), Edward Marcotte (The University of Texas at Austin), Edward Walker (Texas Advanced Computing Center), Victor Eijkhout (Texas Advanced Computing Center), Kelly P Gaither (Texas Advance Computing Center), Maria Esteva (Texas Advanced Computing Center), Jaya Sreevalsan-Nair (International Institute of Information Technology at Bangalore)

#### *Graduate and Postdoctoral Advisors*

Daniel Miranker, Department of Computer Science, University of Texas at Austin, TX.