

## Ying Xu

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### **Education**

Jilin Univeristy, PR China	B.S., computer science	1978-1982
Jilin University, PR China	M.S., computer science	1982-1985
University of Colorado, Boulder, USA	Ph.D., computer science	1986-1991

### **Professional Experience**

2004 -- Director, Institute of Bioinformatics, University of Georgia.  
2003 -- Regents-Georgia Research Alliance Eminent Scholar and Professor, Biochemistry and Molecular Biology Department, University of Georgia  
1997 -- 2003 Group leader/Senior staff scientist, Protein Informatics Group, ORNL  
1996 – 1997 Staff Scientist, Life Sciences Division, ORNL  
1993 – 1996 Research associate, Computer Sciences and Mathematics, ORNL  
1991 – 1993 Visiting assistant professor, Mathematics and Computer Sciences Department, Colorado School of Mines, Golden, Colorado  
1986 – 1991 Teaching/research assistant, Computer Science Department, University of Colorado, Boulder, Colorado

### **Selected Professional Activities (selected from the past three years)**

**Area Chair**, Program Committee, ISMB'04, ISMB'05.

**Member**, Program Committee, RECOMB'05.

**Co-Chair**, Program Committee, The IEEE Computational Systems Bioinformatics Conference, 04, 05, 06.

**Member**, Program Committee, GIW'04, GIW'05, GIW06.

**Member**, Editorial Board of International Journal of Bioinformatics Research and Applications. 2004--present.

**Panelist**, NIH/special review panel "Tools for Collaborations that Involve Data Sharing", Nov 2004.

**Panelist**, NIH/Computational Approaches to Complex Biomedical System Review Panel, March, 2004.

**Co-Chief Editor**, World Scientific Publishing Book Series on "Bioinformatics and Computational Biology". 2003--present.

**Area editor**, editorial board, *Mathematical Biosciences* 2005 – present.

**Area editor** (bioinformatics), Editorial Board, Journal of Computer Science and Technology. 2003--present.

**Panelist**, NSF ITR review panel, 2003.

**Associate Editor**, Journal of Bioinformatics and Computational Biology.

**Panelist**, NSF Biological Database and Informatics Advisory Panel, 2002, 2003, 2005.

### **Awards and Honors (selected since 2001):**

2004 Best paper award, The 15<sup>th</sup> International Conference on Genome Informatics (GIW'04).

2004 IBM Shared University Research (SUR) Award, March 2004.

2004 -- Distinguished visiting scientist, Computational Biology Institute, Oak Ridge National Lab.

2003 Outstanding Service Award, University of Georgia, Nov. 2003.

2003 -- Distinguished Scholar Award, Georgia Cancer Coalition.

2003 ORNL Significant Event Award, March 2003.

2003 National FLC (Federal Laboratory Consortium) Award of Excellence in Technology Transfer, Expression data clustering and visualization resource (EXCAVATOR), Feb. 2003.

2001 R&D100 Award, presented by R&D Magazine in recognition of this year's 100 most significant technological innovations, for the development of PROSPECT software package.

### **Five Most Relevant Publications (out of 200 publications)**

1. Z Su, V Oلمان, F Mao, and **Ying Xu**, Comparative genomics analyses of *ntcA* regulons in *cyanobacteria*: regulation of nitrogen assimilation and its coupling to photosynthesis, *Nucleic Acids Research*, 33 (16): 5156 – 5171, 2005.

2. H. Wu, Z. Su, V Olamn, **Ying Xu**, Prediction of functional modules through comparative genome analysis and application of gene ontology, *Nucleic Acids Research*, 33: 2822-2837, 2005.
3. P. Dam, V Olman, K. Harris, Z. Su, **Ying Xu**, Operon prediction using both genome-specific and general genome information, *Nucleic Acids Research*, 35:288 - 298, 2007.
4. Z. Su, P Dam, F Mao, V. Olman, B Palenik, I Paulsen and **Ying Xu**, Computational inference and experimental validation of nitrogen assimilation regulatory networks in cyanobacterium *Synechococcus sp.* WH8102, *Nucleic Acids Research*, 34(3), 1050 – 1065, 2006.
5. H. Wu, F. Mao, V Olman, **Ying Xu**, Hierarchical Classification of Functionally Equivalent Genes in Prokaryotes, *Nucleic Acids Research*, 2007 (in press).

#### **Five Additional Significant Publications**

1. T Jiang, **Ying Xu**, and M. Q. Zhang, *Current Topics in Computational Molecular Biology*, MIT Press, 2002.
2. J. Zhou, D. Thompson, **Ying Xu**, J. Tiedje, *Microbial Functional Genomics*, John Wiley and Sons, Inc., 2004.
3. **Ying Xu**, D. Xu and J Liang, *Computational Methods for Protein Structure Prediction and Modeling, vol I & II*, Springer, 2006.
4. P. Wang, B. Yan, J. Guo, C. Hicks, **Ying Xu**, Structural genomics analysis of alternative splicing and its application in modeling structures of alternatively spliced variants, pp 18920 – 18925, 102 (52), *Proc Natl Acad Sci USA*, 2005.
5. J. Huang, **Ying Xu**, J.P. Gogarten, Ancient Lateral Gene Transfer Marks the Opisthokont, *Molecular Biology and Evolution*, 22(11), 2142 – 2146, 2005.

#### **Synergistic activities**

Development of computer software programs for biological applications, including GRAIL II, GRAIL-EXP, visGRAIL, PROSPECT, DOMAIN-PARSER, EXCAVATOR, P-MAP, JPOP, etc. Teach both undergraduate and graduate bioinformatics and genomics courses. Led the effort in establishing Ph.D./M.S. degree program in bioinformatics at UGA. Serve as the first director of the UGA Institute of Bioinformatics since 2004.

#### **Collaborators (partial listing in the past four years)**

Mike Adams, Univ. of Georgia; Jeff Becker, Biochemistry Department, Univ. of Tennessee, Knoxville, TN; Devaki Bhaya, Stanford, CA; Michelle Buchanan, Analytical Chemistry Division, ORNL, Oak Ridge, TN; Liming Cai, UGA, Athens, GA; Dave Dixon, Univ of Alabama, AL; Harold Gabow, Computer Science Department, Univ. of Colorado, Boulder, CO; Andrey Gorin, ORNL, Oak Ridge, TN; J.P. Gogarten, Univ of Connecticut, CT; Arthur Grossman, Stanford, CA; Grant Heffelfinger, SNL, NM; Jinling Huang, Biology Department, East Carolina University; Tao Jiang, Computer Science Department, Univ. of California at Riverside; Ming Li, Computer Science Department, University of Waterloo, Canada; Jie Liang, Univ of Illinois at Chicago, IL; Victor Olman, Univ. of Georgia; Brian Palenik, Scripps Oceanography Institute, UCSD; Ian Paulson, TIGR; Cynthia Peterson, Biochemistry Department, Univ. of Tennessee, Knoxville, TN; Jim Prestegard, Univ. of Georgia; Dave Puett, University of Georgia; Engin Serspersu, Microbiology Department, Univ. of Tennessee, Knoxville, TN; Heidi Sofia, PNNL, WA; Ed Uberbacher, ORNL, TN; Ron Wetzal, Medical Center, Univ. of Tennessee, Knoxville, TN; B.C. Wang, University of Georgia; Dong Xu, Univ. of Missouri, St. Louis, MO; Jinbo Xu, MIT, MA; Michael Zhang, Cold Spring Harbor Lab, NY; Jizhong Zhou, Environmental Science Division, ORNL, Oak Ridge, TN; Tong Zhou, Georgia Tech, GA.

#### **Graduate Advisors**

Jiwen Guan, Jilin University, Chanchun, China.  
Harold Gabow, University of Colorado, Boulder.

#### **Postdoctoral trainees advised (since 2002 -- )**

Post doctoral scholars: Dongsup Kim, KAIST, South Korea; Li Wang, Ohio State Univ; Jun-tao Guo, Univ of NC, Charlotte; Tema Fridman, ORNL; Youxing Qu, US Bank; PhuongAn Dam, Univ of Georgia; Zhengchang Su, Univ of NC, Charlotte; Bo Yan, GEICO; Fenglou Mao, Univ of Georgia; Peng Wang, La Jolla Institute for Allergy & Immunology; Harry Peng, HHMI; Won Jae Chung; Chindo Hicks, Loyola Univ; Zhijie Liu, Vitae Pharmaceuticals; Jizhu Lu, IBM TJ Watson Center; Zhong Chen, 3M; Guojun Li, Univ of Georgia; Hongwei Wu, Ga Inst of Tech; Jinling Huang, East Carolina Univ; Huiqing Liu, Rutgers Univ; Fengfeng Zhou, Univ of Georgia; Ping Wan, Beijing Normal Univ; Claire Gervais, Univ of Georgia; Yongbin Ou, Univ of Georgia; Wen Zhou, Univ of Georgia.