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Education and Research Experience

Professor	2011-present	Research Center for Biomedical Information Technology, Institute of Biomedical and Health Engineering, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences. Shenzhen, Guangdong, China.
Assistant research scientist	2009-2011	Computational & Systems Biology Laboratory, Department of Biochemistry and Molecular Biology, and Institute of Bioinformatics, University of Georgia. Athens, Georgia, USA
Group leader (biofuel)	2008-2011	Computational & Systems Biology Laboratory, Department of Biochemistry and Molecular Biology, and Institute of Bioinformatics, University of Georgia. Athens, Georgia, USA
Postdoc	2005-2008	Computational & Systems Biology Laboratory, Department of Biochemistry and Molecular Biology, and Institute of Bioinformatics, University of Georgia. Athens, Georgia, USA
Ph.D.	2000-2005	National High Performance Computing Center (Hefei), Department of Computer Science, University of Science and Technology of China (USTC). Hefei, Anhui, China
B.E.	1996-2000	The Special Class of Gifted Young, University of Science and Technology of China (USTC). Hefei, Anhui, China

Academic services

- **Editorial services:**

1. Associate editor (2011-now): *Frontiers in Bioinformatics and Computational Biology*.

2. Member of editorial board (2011-now): *Interdisciplinary Sciences: Computational Life Sciences*.
 3. Member of editorial board (2009-now): *BioEnergy Research*.
 4. Associate editor (2009-2011): *Sequencing*.
- **Reviewers for funding agencies:**
 1. Austrian Science Fund (FWF), 2011.
 2. Netherlands Organization for Scientific Research (NOW), the Netherlands Genomics Initiative (NGI), 2011.
 3. US NSF and Louisiana Board of Regents, Louisiana Experimental Program to Stimulate Competitive Research (EPSCoR), 2011.
 4. US NSF, Bio-DEB, Evolutionary Genetics, 2010.
 5. UK Natural Environment Research Council, 2009.
 6. North Carolina Biotechnology Center, Science and Technology Development Program, 2008.
 - **Scientific conferences:**
 1. Program Committee Member, International Conference on Intelligent Computing (ICIC), 2012, Huangshan, China, July 25-28.
 2. Program Committee Member, IEEE Conference on Granular Computing (IEEE GrC), 2011, Kaohsiung, Taiwan, November 8-10, 2011.
 3. Program Committee Member, International Conference on Bioinformatics and Biomedical Engineering (iCBBE), 2011, Wuhan, China, May 10-12, 2011.
 4. Organizing Committee Member, International Workshop on Cancer Systems Biology (ICSB), 2011, Changchun, China, July 2-3, 2011.
 5. Program Committee Member, International Conference on Intelligent Computing (ICIC), 2011, Zhengzhou, China, August 11-14, 2011.
 6. Program Committee Member, International Bioinformatics Workshop (IBW), 2010, Wuhan University, Wuhan, China, June 4-6, 2010.
 7. Program Committee Member, IEEE Conference on Granular Computing (IEEE GrC), 2010, Silicon Valley, USA, August 14-16, 2010.
 8. Program Committee Member, International Conference on Intelligent Computing (ICIC), 2010, Changsha, China, August 18-21, 2010.
 9. Program Committee Member, International Bioinformatics Workshop (IBW), 2009, Soochow University, Suzhou, China, June 19-21, 2009.
 10. Program Committee Member, International Conference on Intelligent Computing (ICIC), 2009, University of Ulsan, Korea, Sept. 16-19, 2009.
 11. Program Committee Member, International Conference on Intelligent Computing (ICIC), 2008, Shanghai, P.R.China, Sept. 15-18, 2008.
 12. Program Committee Member, International Conference on Intelligent Computing (ICIC), 2007, Qingdao, Shandong, P.R.China, Aug. 21-24, 2007.
 13. Program Committee Member, Workshop on Intelligent Computing & Bioinformatics of CAS (WICB), 2006, Hefei, Anhui, P.R.China, Nov. 12-14, 2006.
 14. Program Committee Member, IEEE International Conference on Granular Computing (IEEE GrC), 2006, Atlanta, USA, May 10-12, 2006.
 - **Reviewers for journals:** *Advances in Bioinformatics; Acta Biotheoretica; BioEnergy Research; Bioinformatics; Bioinformatics and Biology Insights; Biophysical Chemistry; Biotechnology Letters; BMC Bioinformatics; BMC Evolutionary Biology; BMC Genomics; Cancer Informatics; Computers in Biology and Medicine; FEBS Letters; Gene; Genome Biology; Genomics; Genomics, Proteomics & Bioinformatics; Indian Journal of Biochemistry & Biophysics; International Journal of Data Mining and Bioinformatics; Journal of Bioinformatics and Computational Biology; Journal of Molecular Biology; Nucleic Acid Research; PLoS ONE; Proteomics & Bioinformatics; Science in China - C; Trends in Genetics.*
 - **Reviewers for conferences:** *ACBI 2006; ICIC 2006; IEEE-GRC 2006; PRIB 2006; GIW 2006; GIW 2007; ICIC 2007; CSB 2007; LSMS 2007; APBC 2008; CSB 2008; ICIC 2008; IBW 2009; ICIC 2009; CSB 2009; IBW 2010;*

CSB 2010; *Bioinformatics* 2010; *ISBRA* 2010; *ACM BCB* 2010; *IEEE-GrC* 2010; *IJDMB* 2010; *BIOINFORMATICS* 2011; *ICCABS* 2011; *ISBRA* 2011; *ICIC* 2011; *BIBE* 2011; *BIBM* 2011.

Invited talks and conference presentations

- **Poster:** “Genomic Location is Information: Towards Complete Assignment of Metabolic Pathways by Bacterial Genes”, BioEnergy Science Center Annual Retreat, Chattanooga, TN, USA, July 18-21, 2011.
- **Poster:** “A novel method for assigning holes in metabolic pathways with predicted enzyme-encoding genes based on genomic locations”, Genomic Sciences Contrator-Grantee Meeting/USDA-DOE Plant Feedstock Genomics for Bioenergy Awardees Meeting 2011, Arlington, VA, USA, April 10-13, 2011.
- **Talk:** “Transposable elements are actively involved in the evolution of prokaryotic genomes”, BioConference Live: Life Sciences, March 21-22, 2011.
- **Poster:** “Horizontally transferred cazyme islands in the genus *Clostridium*”, Bioenergy Systems Research Initiative (BSRI) Annual Retreat 2010, Athens, GA, USA, November 15, 2010.
- **Poster:** “Recent gain and loss of CAZyme components in *Clostridium perfringens*”, BESC Science Retreat 2010, Ashville, NC, USA, June 21-23, 2010.
- **Poster:** “Insights into Plant Biomass to Biofuel Conversion from the Genome Sequence, Proteomics and Transcriptomics of the Extremely Thermophilic Bacterium *Caldicellulosiruptor bescii*”, BESC Science Retreat 2010, Ashville, NC, USA, June 21-23, 2010.
- **Talk:** “Sequence structural variations in both eukaryotic and prokaryotic genomes”, University of Georgia, Athens, GA, USA, April 29, 2010.
- **Poster:** “Comparative glydromics in genomes and metagenomes produced by the high-throughput sequencing technique”, Earth Day 2010, Atlanta, GA, USA, April 22, 2010.
- **Poster:** "The intrinsic barcode feature of a genome". Computational Systems Bioinformatics Conference (CSB) 2009, Stanford University, California, USA, August 10-12, 2009.
- **Poster:** "Comparative glydromics revealed the unexpected diverse distribution of two unconventional glydromes. 3rd BESC Science Retreat, Asheville, NC, USA, June 22-24, 2009.
- **Poster:** The intrinsic barcode feature of a genome and its applications". SMBE 2009, Iowa City, IA, USA, June 3-7, 2009.
- **Talk:** "Miniature Transposons in Prokaryotes", University of Georgia, Athens, Georgia, January 22, 2009.
- **Poster:** "pDAWG: plant Database of Annotated cell Wall Genome". 2nd BESC Science Retreat, Chattanooga, TN, USA, December 1-3, 2008.
- **Poster:** "Proteins' indel mutations tend to reside in the internal regions". Life Science Society - Computational Systems Bioinformatics Conference (CSB), 2006, Stanford University, California, USA, Aug. 14-18, 2006.
- **Attendee.** Molecular Evolution, 2006, Gordon Conference, Ventura, California, USA, Feb. 5-10, 2006.
- **Talk:** "Algorithms for Loosely Constrained Multiple Sequence Alignment". International Symposium on Computational and Information Sciences, 2004, Shanghai, China, Dec. 16-18, 2004.

Publications

Book chapters

1. Morgan G.I. Langille, **Fengfeng Zhou**, Amber Fedynak, William W.L. Hsiao, Ying Xu, Fiona S.L. Brinkman, "Mobile genetic elements and their prediction", Chapter 5 in Computational Methods for Understanding Bacterial and Archaeal Genomes. Ying Xu and J Peter Gogarten (eds.) Series on Advances in Bioinformatics and

Computational Biology, Vol. 7. Imperial College Press, London, 2008. Approx. 496 pp. ISBN-13: 978-1-86094-982-1. ISBN-10: 1-86094-982-7.

Papers

* means that the authors contribute equally to that paper.

2. Guoqing Wang, **Fengfeng Zhou**, Victor Olman, Yingying Su, Ying Xu, Fan Li, "Computational prediction and experimental validation of novel markers for detection of STEC O157:H7", *World Journal of Gastroenterology*, 2011 17(14):1910-1914.
3. Phuongan Dam, Irina Kataeva, Sung-Jae Yang, **Fengfeng Zhou**, Yanbin Yin, Wenchi Chou, Farris L., Poole II, Janet Westpheling, Robert Hettich, Richard Giannone, Derrick L. Lewis, Robert Kelly, Harry J. Gilbert, Bernard Henrissat, Ying Xu and Michael W.W. Adams, "Insights into Plant Biomass Conversion from the Genome of the Anaerobic Thermophilic Bacterium *Caldicellulosiruptor bescii* DSM 6725", *Nucleic Acids Research*, 2011 39(8):3240-3254.
4. **Fengfeng Zhou**, Ying Xu, "cBar: a computer program for distinguishing chromosomal sequence fragments from plasmid ones in metagenome data", *Bioinformatics* 2010 26: 2051-2052.
5. Guoqing Wang, **Fengfeng Zhou**, Victor Olman, Fan Li, Ying Xu, "Prediction of pathogenicity islands in enterohemorrhagic *Escherichia coli* O157:H7 using genomic barcodes", *FEBS Letters* 2010 584(1):194-198.
6. **Fengfeng Zhou**, Huiling Chen, Ying Xu, "GASdb: a large-scale and comparative exploration database of glycosyl hydrolysis systems", *BMC Microbiology* 2010 10:69. **Highly accessed**
7. **Fengfeng Zhou** and Ying Xu, "Large scale analyses of glycosylation in cellulases", *Genomics, Proteomics & Bioinformatics* 2009 7(4):194-199.
8. Fenglou Mao, Yanbin Yin, **Fengfeng Zhou**, Wen-Chi Chou, Chan Zhou, Huiling Chen, Ying Xu, "pDAWG: an Integrated Database for Plant Cell-Wall Genes", *BioEnergy Research* 2009 2(4):209-216.
9. Thao Tran, **Fengfeng Zhou**, Sarah Marshburn, Mark Stead, Sidney Kushner, and Ying Xu, "De novo computational prediction of non-coding RNA genes in prokaryotic genomes", *Bioinformatics* 2009 25(22):2897-2905.
10. Irina A Kataeva, Sung-Jae Yang, Phuongan Dam, Farris L Poole II, Yanbin Yin, **Fengfeng Zhou**, Wen-chi Chou, Ying Xu, Lynne Goodwin, David R Sims, John C Detter, Loren J Hausser, Janet Westpheling and Michael WW Adams, "Genome Sequence of the Anaerobic, Thermophilic and Cellulolytic Bacterium *Anaerocellum thermophilum* DSM 6725", *Journal of Bacteriology* 2009 191:3760-3761.
11. Yong Chen*, **Fengfeng Zhou***, Guojun Li, and Ying Xu, "MUST: a system for identification of miniature inverted repeats transposable elements and applications to *Anabaena variabilis* and *Haloquadratum walsbyi*", *Gene* 2009 436:1-7.
12. Bin Liu, **Fengfeng Zhou**, Suijie Wu, Ying Xu and Xiaobo Zhang, "Genomic and Proteomic Characterization of a Thermophilic *Geobacillus* Bacteriophage GBSV1", *Research in Microbiology* 2009 160:166-171.
13. Chan Zhou, **Fengfeng Zhou**, Ying Xu, "Comparative analyses of distributions and functions of Z-DNA in *Arabidopsis* and *rice*", *Genomics* 2009 93:383-391.
14. **Fengfeng Zhou**, Ying Xu, "RepPop: a database for repetitive elements in *Populus trichocarpa*", *BMC Genomics* 2009 10:14.
15. **Fengfeng Zhou***, Victor Olman*, Ying Xu, "Barcodes for Genomes and Applications", *BMC Bioinformatics* 2008 9:546. **Highly accessed**
16. Yong Chen*, **Fengfeng Zhou***, Guojun Li, and Ying Xu, "A recently active MITE, Chunjie, inserted into an operon without disturbing the operon structure in *Geobacter uraniireducens* Rf4", *Genetics* 2008 179: 2291-2297.
17. **Fengfeng Zhou**, Victor Olman, Ying Xu, "Insertion Sequences show diverse recent activities in *Cyanobacteria* and *Archaea*", *BMC Genomics*, 2008 9:36.
18. **Fengfeng Zhou**, Thao Tran, Ying Xu, "Nezha, a novel active miniature inverted-repeat transposable element in cyanobacteria", *Biochemical and Biophysical Research Communications* 2008 365(4):790-794.

19. Yu Xue, **Fengfeng Zhou**, Ying Xu and Xuebiao Yao, "GPS: A computational protocol for kinase-specific phosphorylation site prediction", *Nature Protocol*, 2007 (invited).
20. **Fengfeng Zhou***, Yu Xue*, Xuebiao Yao, Ying Xu, "A general user interface for prediction servers of proteins' post-translational modification sites", *Nature Protocols* 2006 **1**(3):1318-1321.
21. Yu Xue*, **Fengfeng Zhou***, Chuanhai Fu, Ying Xu, Xuebiao Yao, "SUMOsp: a web server for sumoylation sites prediction", *Nucl Acids Res* 2006 **34**:W254-W257.
22. **Fengfeng Zhou***, Yu Xue*, Xuebiao Yao, Ying Xu, "CSS-Palm: Palmitoylation Site Prediction with a Clustering and Scoring Strategy (CSS)", *Bioinformatics* 2006 **22**(7):894-896.
23. **Fengfeng Zhou***, Yu Xue*, Hualei Lu, Guoliang Chen, Xuebiao Yao, "A genome-scale analysis of sumoylation-related biological processes and functions in human nucleus", *FEBS Letters* 2005 **579**: 3369-3375.
24. Yu Xue*, **Fengfeng Zhou***, Minjie Zhu, Kashif Ahmed, Guoliang Chen, Xuebiao Yao, "GPS: A comprehensive www server for phosphorylation sites prediction", *Nucleic Acids Research* 2005 **33**: W184-W187.
25. Zuozhou Chen, Chenghai Xue, Sheng Zhu, **Fengfeng Zhou**, Xuefeng Bruce Ling, Guoping Liu, Liangbiao Chen, "GoPipe: Streamlined Gene Ontology Annotation for Batch Anonymous Sequences with Statistics", *Progress in Biochemistry and Biophysics* 2005 **32**:187-191.
26. **Fengfeng Zhou**, Yinlong Xu, Guoliang Chen, "No-wait Scheduling in Single-hop Multi-channel LANs", *Information Processing Letters* 2005 **93**:19-24.
27. **Fengfeng Zhou**, Yinlong Xu, Guoliang Chen, "A Scheduling Algorithm on Symmetric Fiber Trees with Tunable ADMs", (in Chinese), *Journal of Computer Science* 2005 **28**:774-781.
28. **Fengfeng Zhou***, Yu Xue*, Guoliang Chen, Xuebiao Yao, "GPS: A Novel Group-based Phosphorylation Predicting and Scoring Method", *Biochemical and Biophysical Research Communications* 2004 **325**:1443-1448.
29. Bin Song, **Fengfeng Zhou**, Guoliang Chen, "Algorithms for Loosely Constrained Multiple Sequence Alignment", *Lecture Notes in Computer Science (LNCS)* **3314** (CIS'2004), pp. 213-218, 2004.
30. **Fengfeng Zhou**, Guoliang Chen, Yinlong Xu, J. Gu, "Minimizing ADMs on WDM Directed Fiber Trees", *J. Comput. Sci. & Technol.* 2003 **18**(6):725-731.

Preprints

* means that the authors contribute equally to that paper.

31. Yu Xue*, **Fengfeng Zhou***, Hualei Lu, Guoliang Chen, Xuebiao Yao, "SUMO Substrates and Sites Prediction Combining Pattern Recognition and Phylogenetic Conservation", arXiv:q-bio.GN/0409011 .
32. **Fengfeng Zhou**, Guoliang Chen, Yinlong Xu, "Construction of Small Worlds in the Physical Topology of Wireless Networks", arXiv:cs.NI/0503051 .