

# Fengfeng Zhou, Ph.D.

Research Scientist  
Computational & Systems Biology Laboratory  
Department of Biochemistry and Molecular Biology, and Institute of Bioinformatics  
University of Georgia  
[ffzhou@csbl.bmb.uga.edu](mailto:ffzhou@csbl.bmb.uga.edu)  
<http://csbl.bmb.uga.edu/~ffzhou/>  
Last update: 2009-09-22

## Education

- Ph.D. University of Science and Technology of China, Ph.D., Computer Science, 2005
- B.E. University of Science and Technology of China, B.E., Computer Science, 2000.

## Research Experience

- Jan, 2009 – *now* *Research Scientist*, Department of Biochemistry and Molecular Biology, and Institute of Bioinformatics, University of Georgia, Athens, Georgia, 30602-7229
- Nov, 2008 – *now* *Group leader*, Department of Biochemistry and Molecular Biology, and Institute of Bioinformatics, University of Georgia, Athens, Georgia, 30602-7229
- Sept, 2005 – Dec, 2008 *Postdoc Research Associate*, Department of Biochemistry and Molecular Biology, and Institute of Bioinformatics, University of Georgia, Athens, Georgia, 30602-7229

## Research Interests

- Characterizations of cellulolysis pathway in prokaryotes and fungi.
- Characterizations of mobile genetic elements, including transposons and Insertion Sequences, and their influences on the host genomes.
- Metagenomic analysis of microbial communities.
- Data mining and large-scale analysis of microbiological genomes.
- *In silico* prediction and large-scale analysis of proteins' post-translational modifications, including SUMOylation, phosphorylation, palmitoylation, acetylation, etc.
- Designing and analyzing approximation algorithms for combinatorial optimization problems.
- Detailed analysis of genomic structures.

## 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", 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.

## Journal publications

1. 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", Accepted by *Bioinformatics*.

2. **Fengfeng Zhou** and Ying Xu, "Large scale analyses of glycosylation in cellulases", Accepted by *Genomics, Proteomics & Bioinformatics*.
3. Irina A Kataeva, ..., **Fengfeng Zhou** (6th author), ..., Ying Xu, ... and Michael WW Adams, "Genome Sequence of the Anaerobic, Thermophilic and Cellulolytic Bacterium *Anaerocellum thermophilum* DSM 6725", Accepted by *Journal of Bacteriology*.
4. 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*", Accepted by *Gene*.
5. 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.
6. Chan Zhou, **Fengfeng Zhou**, Ying Xu, "Comparative analyses of distributions and functions of Z-DNA in *Arabidopsis* and *rice*", *Genomics* 2009 93:383-391.
7. **Fengfeng Zhou**, Ying Xu, "RepPop: a database for repetitive elements in *Populus trichocarpa*", *BMC Genomics* 2009 10:14.
8. **Fengfeng Zhou**\*, Victor Olman\*, Ying Xu, "Barcodes for Genomes and Applications", *BMC Bioinformatics* 2008 9:546. Highly accessed
9. 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.  
Website: <http://csbl.bmb.uga.edu/publications/materials/ffzhou/chunjie/>
10. **Fengfeng Zhou**, Victor Olman, Ying Xu, "Insertion Sequences show diverse recent activities in Cyanobacteria and Archaea", *BMC Genomics*, 2008 9:36.  
Website: [http://csbl.bmb.uga.edu/~ffzhou/isa\\_web/](http://csbl.bmb.uga.edu/~ffzhou/isa_web/)
11. **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.
12. **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.  
Web site: <http://csbl.bmb.uga.edu/~ffzhou/PTMP-UI/> or <http://bioinformatics.lcd-ustc.org/PTMP-UI/>
13. 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.  
Web site: <http://bioinformatics.lcd-ustc.org/sumosp/index.php>
14. **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.  
Web site: [http://bioinformatics.lcd-ustc.org/css\\_palm/](http://bioinformatics.lcd-ustc.org/css_palm/)
15. **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.  
Web site: <http://bioinformatics.lcd-ustc.org/sumo/>
16. 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.  
Web site: [http://973-proteinweb.ustc.edu.cn/gps/gps\\_web/](http://973-proteinweb.ustc.edu.cn/gps/gps_web/)
17. 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.
18. **Fengfeng Zhou**, Yinlong Xu, Guoliang Chen, "No-wait Scheduling in Single-hop Multi-channel LANs", *Information Processing Letters* 2005 93:19-24.
19. **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.
20. **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.  
Web site: [http://973-proteinweb.ustc.edu.cn/gps/gps\\_web/](http://973-proteinweb.ustc.edu.cn/gps/gps_web/)
21. **Fengfeng Zhou**, Guoliang Chen, Yinlong Xu, J. Gu, "Minimizing ADMs on WDM Directed Fiber Trees", *J. Comput. Sci. & Technol.* 2003 18(6):725-731.

\* means that the indicated authors contribute equally to that paper.