

## Wei Xu

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School of Computer and Communication Sciences  
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- Personal** Born in 1979, Chinese Citizen & Canadian Permanent Resident.  
Since 2008, I adopted *Xu, Andrew Wei* as my academic name, as the name *Xu, Wei* has been used by many other scientists.
- Research Interest** Comparative Genomics and other areas of Computational Biology,  
Probabilistic Analysis, Statistics Inference,  
Algorithm Design, Machine Learning,  
Combinatorial Enumeration, Combinatorial Optimization, Random Graph
- Education**
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|--|----------------------|
| <i>Ph.D.</i> in Mathematics<br>University of Ottawa, Canada<br>Supervised by <i>David Sankoff</i><br>Research Area: Comparative Genomics | May 2006—Nov. 2008   |
| <i>Master program</i> in Statistics<br>University of Ottawa, Canada<br>Supervised by <i>David Sankoff</i>                                | Sept. 2005—Apr. 2006 |
| <i>Master of Science</i> in Physics<br>McMaster University, Canada   | Sept. 2003—Aug. 2005 |
| <i>Bachelor of Science</i> in Biophysics<br>Nanjing University, China  | Jul. 1998—Jun. 2002  |
- Academic Experience**
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|--|---------------------|
| School of Computer and Communication Sciences, EPFL<br><i>Postdoctoral Fellow</i> with Bernard Moret | Sept. 2008— now     |
| Institute of Neuroscience, Chinese Academy of Science<br><i>Research Assistant</i>                   | Jan. 2002—Apr. 2002 |
- Honours & Award**
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|--------------------------------------|----------------------|
| HPCVL / Sun Microsystems Scholarship | Jan. 2008—Dec. 2008  |
| HPCVL / Sun Microsystems Scholarship | Sept. 2006—Aug. 2007 |
- Peer-reviewed Papers**
- [10] “Phylogenetic Reconstruction with High-Resolution Rearrangement Data”  
**Andrew Wei Xu** and Bernard M.E. Moret  
*submitted*
- [9] “Heuristics for the Inversion Median Problem.”  
Vaibhav Rajan\*, **Andrew Wei Xu**\*, Yu Lin , Krister M. Swenson and Bernard M.E. Moret  
*Proc. 8th Asia-Pacific Bioinformatics Conf. APBC’10, accepted, to appear in BMC Bioinformatics.*
- \* these authors contributed equally

[8] “DCJ Median Problems on Linear Multichromosomal Genomes: Graph Representation and Fast Exact Solutions.”

**Andrew Wei Xu**

*F.D. Ciccarelli and I. Miklos (Eds.): Proceedings of RECOMB Comparative Genomics, LNBI 5817, 7083. 2009*

[7] “A Fast and Exact Algorithm for the Median of three Problem: a Graph Decomposition Approach.”

**Andrew Wei Xu**

*Journal of computational biology, 2009, 16(10), 1-13*

[6] “Decompositions of Multiple Breakpoint Graphs and Rapid Exact Solutions to the Median Problem.”

**Andrew Wei Xu** and David Sankoff

*K.A. Crandall and J. Lagergren (Eds.): Proceedings of the Workshop on Algorithms in Bioinformatics, LCBI 5251, 25-37. 2008*

[5] “Poisson Adjacency Distributions in Genome Comparison: Multichromosomal, Circular, Signed and Unsigned Cases”

**Wei Xu**, Benoît Alain and David Sankoff

*Bioinformatics 2008 24(16):i146-i152.*

[4] “The Distribution of Distances Between Randomly Constructed Genomes: Generating Function, Expectation, Variance and Limits.”

**Wei Xu**

*Journal of Bioinformatics and Computational Biology. 6(1): 23-36. 2008*

[3] “The Distance Between Randomly Constructed Genomes.”

**Wei Xu**

*David Sankoff, Lusheng Wang and Francis Chin (Eds.): Proceedings of the 5th Asia-Pacific Bioinformatics Conference. 227-236. 2007*

[2] “Paths and Cycles in Breakpoint Graphs of Random Multichromosomal Genomes”

**Wei Xu**, Chunfang Zheng and David Sankoff

*Journal of Computational Biology. 14(4): 423-435. 2007*

[1] “The Relationship between the Rate of Molecular Evolution and the Rate of Genome Rearrangement in Animal Mitochondrial Genomes”

**Wei Xu**, Daniel Jameson, Bin Tang and Paul G. Higgs

*Journal of Molecular Evolution 63(3): 375-392 2006*

## **Teaching Experience**

I have been guest lectures in the following courses at EPFL:

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|-----------------------|--------------|
| Advanced Algorithm    | spring, 2009 |
| Computational Biology | fall, 2009   |