Ling-Yun Wu

Curriculum Vitae

Institute of Applied Mathematics
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Beijing 100190, China

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PROFILE

Ling-Yun Wu is Professor at the Academy of Mathematics and Systems Science (AMSS), Chinese Academy of Sciences (CAS). He is the director of Bioinformatics Center of AMSS, and the member of Executive Council of Operations Research Society of China. He received his Ph.D. degree in Operations Research and Cybernetics from AMSS of CAS in 2002. He had taken the postdoctoral position at the Hong Kong University of Science and Technology and Weill Medical College of Cornell University. His current interest is in operations research and information science, especially the application of OR in bioinformatics and systems biology, and the application of OR in logistics and financial technology. The main research works include DNA sequencing algorithms, protein structure alignment algorithms, molecular biological networks alignment algorithms, biomarker identification methods, optimal slotting and order picking strategy for autonomous unmanned warehouse, and so on. In 2014, he got the Youth OR Award from Operations Research Society of China.

PERSONAL DATA

Name:	Ling-Yun Wu
Citizenship:	People's Republic of China
Birth Date and Place:	November 8, 1975, Fujian, China
Gender:	Male
Phone:	+86-10-82541872
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EDUCATION

1997 – 2002	Academy of Mathematics and Systems Science, CAS Ph.D. Operational Research Supervisor: Prof. Xiang-Sun Zhang
1993 – 1997	Wuhan University, China B.S. Applied Mathematics

PRESENT POSITIONS

2015 – present	Professor Academy of Mathematics and Systems Science, CAS
2016 – present	Director Bioinformatics Center, Academy of Mathematics and Systems Science, CAS
2017 – present	Assistant Director Institute of Applied Mathematics, Academy of Mathematics and Systems Science, CAS

EXPERIENCE

1997	Software Developer (Part-time) Wuhan University Designed and developed a personnel management system for the Wuhan University Committee of CCP.
1997 – 2002	Network System Administrator (Part-time) Academy of Mathematics and Systems Science, CAS Designed and built a computer network with more than 400 PC and more than 30 Unix/Linux servers and super computers. Much experienced in network administration and maintenance.
2002 – 2003	Research Associate (Postdoctoral) Department of Industrial Engineering & Engineering Management, Hong Kong University of Science and Technology
2003 – 2005	Postdoctoral Fellow Academy of Mathematics and Systems Science, CAS
2005 – 2007	Assistant Professor Academy of Mathematics and Systems Science, CAS
2006	Visiting Scholar School of Mathematical Sciences, Fudan University
2007	Visiting Scholar Department of Mathematics, Chinese University of Hong Kong
2008 – 2009	Postdoctoral Fellow The Methodist Hospital Research Institute, Weill Medical College of Cornell University
2007 – 2015	Associate Professor Academy of Mathematics and Systems Science, CAS
2007 – 2012	Deputy Director Department of Operations Research, Institute of Applied Mathematics, Academy of Mathematics and Systems Science, CAS
2012 – 2017	Director Department of Operations Research, Institute of Applied Mathematics, Academy of Mathematics and Systems Science, CAS

QUALIFICATIONS

TOEFL	600 (57 63 60) TWE 4.0 (Oct. 2001)
Software Engineer	Rank Certificate of Computer Software, 1996 Approved and issued by State Council Office of Promotion and Application of Electronics and Information Systems.

SOCIAL ACTIVITIES

2009 – present	China Zhi Gong Party, Member
2014 – 2017	China Zhi Gong Party, CAS Haidian Branch Committee, Member
2017 – present	China Zhi Gong Party, CAS Haidian Branch Committee, Vice Chairman
2017 – present	China Zhi Gong Party, CAS Committee, Member
2017 – present	China Zhi Gong Party, Beijing Committee, Working Committee for Science and Technology, Vice Director

AWARDS

2007	Top 10 Research Advances, AMSS, CAS
2007	Research Award, K. C. Wong Education Foundation
2008	Top 10 Outstanding Scientific Research Achievement, AMSS, CAS
2014	The Youth OR Award, Operations Research Society of China

SOCIETY MEMBERSHIP

2012 – present	Operations Research Society of China (ORSC), Member of Council
2016 – present	Operations Research Society of China (ORSC), Member of Executive Council
2019 – present	China Society for Industrial and Applied Mathematics (CSIAM), Vice Secretary-General
2011 – present	Operations Research Society of China, Computational Systems Biology Society, Vice President
2017 – present	Chinese Society of Biochemistry and Molecular Biology, Systems Biology Division, Member
2018 – present	China Medicinal Biotechnology Association, Society of Gene Technologies, Member
2006 – present	China Simulation Federation, Life System Modeling and Simulation Technical Committee, Member

EDITORIAL BOARD

2010 – present	Operations Research and Management Science
2016 – present	Scientific Reports

JOURNAL REFEREE

- Advances in Bioinformatics
- Annals of Biomedical Engineering
- Applied Mathematical Modelling
- Bioinformatics
- BMC Bioinformatics
- BMC Systems Biology
- Discrete Optimization
- European Journal of Operational Research

- IEEE Transactions on Circuits and Systems I
- IET Systems Biology
- Information Sciences
- Journal of Global Optimization
- Journal of Theoretical Biology
- Neural Processing Letters
- Neurocomputing
- Oncotarget
- Proceedings of the IEEE
- Acta Mathematicae Applicatae Sinica (Chinese Series)
- Journal of Mathematical Research and Exposition (Chinese Series)
- Journal of Systems Science and Mathematical Science (Chinese Series)
- OR Transactions (Chinese Series)
- Progress in Natural Science (Chinese Series)
- Computer Engineering and Applications (Chinese Series)

CONFERENCE SERVICES

1999	Service Volunteer The 15th Conference of International Federation of Operations Research Societies, Beijing, China, August 16–20, 1999.
2002	Organizing Committee The 4th International Symposium on Operations Research and Its Applications (ISORA), Three Gorges, Yichang-Chongqing, China, June 1–4, 2002.
2002	IT Service Manager The 24th International Congress of Mathematicians (ICM), Beijing, China, August 20–28, 2002.
2004	Organizing Committee The 7th National Conference of Operations Research Society of China, Qingdao, China, October 16–20, 2004.

2005 Organizing Committee
The 5th International Symposium on Operations Research and Its Applications (ISORA), Lhasa-Nyingchi, Tibet, China, August 8–13, 2005.

2006 Organizing Committee
The 8th National Conference of Operations Research Society of China, Shenzhen, China, June 29–July 2, 2006.

2006 Organizing Committee
The 6th International Symposium on Operations Research and Its Applications (ISORA), Urumqi, Xinjiang, China, August 8–12, 2006.

2007 Organizing Committee
The 1st International Symposium on Optimization and Systems Biology (OSB), Beijing, China, August 7–9, 2007.

2007 Program Committee
The 2007 International Conference on Intelligent Computing (ICIC), Qingdao, China, August 21–24, 2007.

2007 Program Committee
The 2nd International Conference on Life System Modeling and Simulation (LSMS), Shanghai, China, September 14–17, 2007.

2008 Program Committee
The 2008 International Conference on Intelligent Computing (ICIC), Shanghai, China, September 15–18, 2008.

2008 Organizing Committee
The 2nd International Symposium on Optimization and Systems Biology (OSB), Lijiang, China, October 31–November 3, 2008.

2009 Program Committee
The 2009 International Conference on Intelligent Computing (ICIC), Ulsan, Korea, September 16–19, 2009.

2009 Organizing Committee
The 3rd International Symposium on Optimization and Systems Biology (OSB), Zhangjiajie, China, September 20–22, 2009.

2009 Organizing Committee
The 8th International Symposium on Operations Research and Its Applications (ISORA), Zhangjiajie, China, September 20–22, 2009.

2010 Program Committee
The 2010 International Conference on Intelligent Computing (ICIC), Changsha, China, August 18–21, 2010

2010 Organizing Committee
The 9th International Symposium on Operations Research and Its Applications (ISORA), Jiuzhaigou, China, August 20–24, 2010.

2010 Organizing Committee
The 4th International Conference on Computational Systems Biology (ISB), Suzhou, China, September 9–11, 2010.

2011 Organizing Committee
The 10th International Symposium on Operations Research and Its Applications (ISORA), Dunhuang, China, August 28–31, 2011.

2011 Organizing Committee
The 5th IEEE International Conference on Systems Biology (ISB), Zhuhai, China, September 2–4, 2011.

2012 Organizing Committee
The 6th IEEE International Conference on Systems Biology (ISB), Xi'an, China, August 18–20, 2012.

2012 Organizing Committee
The 9th National Meeting of the Operations Research Society of China and 2012 Annual Conference, Shenyang, China, October 19–22, 2012.

2013 Organizing Committee
The 11th International Symposium on Operations Research and Its Applications (ISORA), Huangshan, China, August 23–25, 2013.

2013 Organizing Committee
The 7th International Conference on Systems Biology (ISB), Huangshan, China, August 23–25, 2013.

2014 Organizing Committee
The Operations Research Society of China 2014 Annual Conference, Xuzhou, China, October 17–20, 2014.

2014 Organizing Committee
The 8th International Conference on Systems Biology & 4th Translational Bioinformatics Conference (ISB/TBC), Qingdao, China, October 24–27, 2014.

2015 Organizing Committee
The 12th International Symposium on Operations Research and Its Applications (ISORA), Luoyang, China, August 21–24, 2015.

2015 Organizing Committee
The 9th International Conference on Systems Biology (ISB), Luoyang, China, August 21–24, 2015.

2016 Organizing Committee
The 10th International Conference on Systems Biology (ISB), Weihai, China, August 19–22, 2016.

2016 Organizing Committee
The 10th National Meeting of the Operations Research Society of China and 2016 Annual Conference, Kunming, China, October 13–17, 2016.

2017 Organizing Committee
The 11th International Conference on Computational Systems Biology (ISB), Shenzhen, China, August 18–21, 2017.

2018 Program Committee Chair
The 12th International Conference on Computational Systems Biology (ISB), Guiyang, China, August 18–21, 2018.

PRESENTATIONS & COURSES

2000 Invited Speaker
The International Session of APORS, Fall Annual Conference of Operations Research Society of Japan, Tokyo, Japan, September 27–28, 2000.

2001 Poster Presentation
Application of Discrete Hopfield-type Neural Networks for Max-Cut Problems
The 8th International Conference on Neural Information Processing (ICONIP), Shanghai, China, November 14–18, 2001.

2006 Short Seminar Course
Brief Introduction to Bioinformatics
School of Mathematical Sciences, Fudan University
Shanghai, October, 2006.

2007 Short Seminar Course
Brief Introduction to Bioinformatics
Department of Mathematics, Chinese University of Hong Kong
Hong Kong, May, 2007.

2009 Presentation
Semi-supervised Drug-Protein Interaction Prediction from Heterogeneous Spaces
The 3rd International Symposium on Optimization and Systems Biology (OSB 2009), Zhangjiajie, Hunan, September 20–22, 2009.

2009 Presentation
Conditional Random Fields Approach for LOH Inference
Bioinformatics Center, Institute for Chemical Research, Kyoto University
Kyoto, Japan, December 10, 2009.

2009 Presentation
Conditional Random Fields Approach for LOH Inference
Computational Biology Research Center (CBRC), National Institute of Advanced Industrial Science and Technology (AIST)
Tokyo, Japan, December 11, 2009.

2009 Poster Presentation
Identifying Functional Motifs on Protein Surfaces by Structural Alignment with Sequence Information
The 20th International Conference on Genome Informatics (GIW 2009), Yokohama, Japan, December 14–16, 2009.

2010 Poster Presentation
An Efficient Network Querying Method Based on Conditional Random Fields
The 21th International Conference on Genome Informatics (GIW 2010), Hangzhou, China, December 15–18, 2010.

RESEARCH INTERESTS

- Bioinformatics
- Systems Biology
- Combinatorial Optimization
- Artificial Neural Networks
- Application of Operations Research

PROJECTS

1999 – 2002	Important Mathematical Problems in Bioinformatics Supported by Academy of Mathematics and Systems Science, CAS.
1999 – 2002	Applications of Neural Networks in Optimization Supported by Academy of Mathematics and Systems Science, CAS.
2001	Evaluation of the Education Level of Middle Schools in Kunming This work is a graduate student research project supported by CAS.
2002 – 2003	Decision Support Tools for Intelligent Multi-modal Transportation Logistics Management Systems This is a research project by Department of Industrial Engineering & Engineering Management, Hong Kong University of Science and Technology, and supported by Hong Kong Innovation Technology Fund.
2004 – 2005	Strategic Planning of the Electrical Government of China Sponsored by State Council Informatization Office.
2007 – 2008	Research on Tax Revenue Prediction Methods Supported by Department of Planning and Statistics, State Administration of Taxation.
2009 – 2010	Research on Data Mining and Modeling for Industrial Safety Supported by Beijing Municipal Institute of Labour Protection.
2009 – 2010	Research on Multiple Department Coordinated Decision Model for Urban Public Facility Emergency Management Supported by Beijing Research Center of Urban System Engineering.
2017 – 2019	Research on High Performance Blockchain Network Technology Supported by Beijing Tai Cloud Corporation.

2017 – 2018 Optimal slotting and order picking strategy for autonomous unmanned warehouse
Supported by JD.com.

GRANTS

2004 – 2005 Research on the Algorithm of DNA Sequencing
Principal Investigator, Research Grant, No. 20040350428
National Postdoctoral Foundation of China

2004 – 2006 Modeling and Optimization of Supply Chain Design and Management
Joint Investigator, Youth Research Grant, No. 70302003
National Natural Science Foundation of China (NSFC)

2005 – 2007 Research on Several Difficult Bioinformatics Problems by Using OR Methodologies
Joint Investigator, Research Grant, No. 10471141
National Natural Science Foundation of China (NSFC)

2005 – 2008 Some Important Problem in Bioinformatics
Joint Investigator, Important Direction Research Grant
Chinese Academy of Sciences (CAS)

2006 – 2008 Research on Models and Algorithms of Haplotype Inference Problem in Bioinformatics
Principal Investigator, Youth Research Grant, No. 60503004
National Natural Science Foundation of China (NSFC)

2007 – 2009 Protein Function Annotation and Prediction Based on Three Dimensional Structural and High Throughput Experimental Data
Joint Investigator, International Cooperation Research Grant, No. 10711140116
National Natural Science Foundation of China (NSFC)

2007 – 2010 Bioinformatics and Optimization
Joint Investigator, Key Research Grant, No. 10631070
National Natural Science Foundation of China (NSFC)

2007 – 2011 Function of molecular network of type 2 diabetes progression
Joint Investigator, 973 SubProgram, No. 2006CB503910
Mechanism of Type 2 Diabetes Progression
973 Program, No. 2006CB503900
Ministry of Science and Technology of China

2008	Single nucleotide polymorphism (SNP) array data analysis method Principal Investigator, Research Award K. C. Wong Education Foundation, Hong Kong
2009 – 2012	Research on the applications of optimization methods in information technology Joint Investigator, Important Direction Research Grant, No. kjcx-yw-s7 Chinese Academy of Sciences (CAS)
2010 – 2012	Bioinformatics methods based on conditional random fields Principal Investigator, Research Grant, No. 60970091 National Natural Science Foundation of China (NSFC)
2012 – 2016	Optimization in Complex Networks and Its Applications in Systems Biology Joint Investigator, Key Research Grant, No. 11131009 National Natural Science Foundation of China (NSFC)
2014 – 2016	Modeling and Algorithms for Identifying Dynamic Network Biomarkers Principal Investigator, Research Grant, No. 91330114 National Natural Science Foundation of China (NSFC)
2017 – 2021	Research on Graph Theory Model and Algorithm with Their Applications in Bioinformatics Joint Investigator, Key Research Grant, No. 11631014 National Natural Science Foundation of China (NSFC)
2017 – 2019	Optimization Modeling and Algorithms for Deep Analyses of Cancer Genomics Data Joint Investigator, International Cooperation Research Grant, No. 11661141019 National Natural Science Foundation of China (NSFC)
2018 – 2019	Computational Modeling for Stem Cell Regeneration with Application to Cancer Development Dynamics Joint Investigator, Key Research Grant, No. 91730301 National Natural Science Foundation of China (NSFC)

BOOKS

1. Chinese Version of the 50th Anniversary Issue of *Operations Research*
   Edited by Xiang-Sun Zhang, De-Gang Liu, Jing Zhang, Ling-Yun Wu, and Yong Wang. Special Issue of *Operations Research and Management Science*, Vol. 13, 2004. (in Chinese)

2. Credit Portfolio Management (Chinese Edition)
   Charles Simithson. Translated by Ji-Hong Zhang, De-Sheng Chen, Ling-Yun Wu, and Liang-Feng Chang. China Remin University Press, Beijing, 2006. (in Chinese)

PROCEEDINGS

3. Operations Research and Its Applications, *Lecture Notes in Operations Research 5*
   Edited by Xiang-Sun Zhang, De-Gang Liu, and Ling-Yun Wu. Proceedings of the Fifth International Symposium of Operations Research and Its Applications, Tibet, China, 8–13 August, 2005. World Publishing Corporation, Beijing, 2005. (ISTP: BEI33)

4. Proceedings of the 8th National Conference of Operations Research Society of China
   Edited by Ya-Xiang Yuan, Xiao-Dong Hu, De-Gang Liu, and Ling-Yun Wu. Global-Link Publishing Company, Hong Kong, 2006. (in Chinese)

5. Operations Research and Its Applications, *Lecture Notes in Operations Research 6*
   Edited by Xiang-Sun Zhang, De-Gang Liu, and Ling-Yun Wu. Proceedings of the Sixth International Symposium of Operations Research and Its Applications, Xinjiang, China, 8–12 August, 2006. World Publishing Corporation, Beijing, 2006. (ISTP: BFB26)

6. Optimization and Systems Biology, *Lecture Notes in Operations Research 7*
   Edited by Xiang-Sun Zhang, Luonan Chen, Ling-Yun Wu, and Yong Wang. Proceedings of the First International Symposium of Optimization and Systems Biology, Beijing, China, 8–10 August, 2007. World Publishing Corporation, Beijing, 2007. (ISTP)

7. Optimization and Systems Biology, *Lecture Notes in Operations Research 9*
   Edited by Xiang-Sun Zhang, Luonan Chen, Ling-Yun Wu, and Yong Wang. Proceedings of the Second International Symposium of Optimization and Systems Biology, Lijiang, China, 31 October–3 November, 2008. World Publishing Corporation, Beijing, 2008. (ISTP)

8. Optimization and Systems Biology, *Lecture Notes in Operations Research 11*
   Edited by Luonan Chen, Xiang-Sun Zhang, Ling-Yun Wu, and Yong Wang. Proceedings of the Third International Symposium of Optimization and Systems Biology, Zhangjiajie, China, 20–22 September, 2009. World Publishing Corporation, Beijing, 2009. (ISTP)

9. Operations Research and Its Applications, *Lecture Notes in Operations Research 12*
   Edited by Xiang-Sun Zhang, De-Gang Liu, Ling-Yun Wu, and Yong Wang. Proceedings

of the Ninth International Symposium of Operations Research and Its Applications, Chengdu-Jiuzhaigou, China, 19–23 August, 2010. World Publishing Corporation, Beijing, 2010. (ISTP)

10. Optimization and Systems Biology, *Lecture Notes in Operations Research 13*
Edited by Luonan Chen, Xiang-Sun Zhang, Bairong Shen, Ling-Yun Wu, and Yong Wang. Proceedings of the Fourth International Conference on Computational Systems Biology, Suzhou, China, 9–11 September, 2010. World Publishing Corporation, Beijing, 2010. (ISTP)

11. Proceedings of the 10th National Conference of Operations Research Society of China
Edited by Ya-Xiang Yuan, Xiao-Dong Hu, Ling-Yun Wu, and De-Gang Liu. Global-Link Publishing Company, Hong Kong, 2010. (in Chinese)

12. Operations Research and Its Applications, *Lecture Notes in Operations Research 14*
Edited by Xiang-Sun Zhang, De-Gang Liu, Ling-Yun Wu, and Yong Wang. Proceedings of the Tenth International Symposium of Operations Research and Its Applications, Dunhuang, China, 28–31 August, 2011. World Publishing Corporation, Beijing, 2011. (ISTP)

13. Proceedings of 2011 IEEE International Conference on Systems Biology
Edited by Luonan Chen, Xiang-Sun Zhang, Ling-Yun Wu, and Yong Wang. Zhuhai, China, 2–4 September, 2011. IEEE, 2011. (EI)

14. Proceedings of 2012 IEEE International Conference on Systems Biology
Edited by Luonan Chen, Xiang-Sun Zhang, Ling-Yun Wu, and Yong Wang. Xi'an, China, 18–20 August, 2012. IEEE, 2012. (EI)

15. Proceedings of 2013 International Conference on Systems Biology
Edited by Luonan Chen, Xiang-Sun Zhang, Ling-Yun Wu, and Yong Wang. Huangshan, China, 23–25 August, 2013. IEEE, 2013. (EI)

16. Proceedings of 2013 International Symposium of Operations Research and Its Applications
Edited by Xiang-Sun Zhang, De-Gang Liu, Ling-Yun Wu, and Yong Wang. Huangshan, China, 23–25 August, 2013. IET, 2013. (EI)

17. Proceedings of 2014 International Conference on Systems Biology
Edited by Luonan Chen, Xiang-Sun Zhang, Ling-Yun Wu, and Yong Wang. Qingdao, China, 24–27 October, 2014. IEEE, 2014. (EI)

CHAPTERS

18. Computational Imaging and Modeling for System Biology
Ling-Yun Wu, Xiaobo Zhou, and Stephen T. C. Wong. Chapter 17 in *Elements of Computational Systems Biology*, Huma M. Lodhi and Stephen H. Muggleton (Editors). John Wiley & Sons, March, 2010.

19. Haplotype Inference Models and Algorithms
    Ling-Yun Wu. Chapter 36 in *Algorithms in Computational Molecular Biology: Techniques, Approaches and Applications*, Mourad Elloumi and Albert Y. Zomaya (Editors). John Wiley & Sons, Febuary, 2011.

20. Performing Network Alignments with R
    Qiang Huang and Ling-Yun Wu. Chapter 7 in *Computational Network Analysis with R: Applications in Biology, Medicine and Chemistry*, Matthias Dehmer, Yongtang Shi, and Frank Emmert-Streib (Editors). John Wiley & Sons, October, 2016.

REFEREED JOURNAL ARTICLES

1. Xiang-Sun Zhang, Ji-Hong Zhang and Ling-Yun Wu. Combinatorial optimization problems in the positional DNA sequencing by hybridization and its algorithms. *Journal of Systems Science and Mathematical Science*, 22(3):258–269, 2002. (in Chinese)

2. Ji-Hong Zhang, Ling-Yun Wu and Xiang-Sun Zhang. Reconstruction of DNA sequencing by hybridization. *Bioinformatics*, 19(1):14–21, 2003. (SCI: 636PA, PubMed: 12499288)

3. Rui-Sheng Wang, Ling-Yun Wu, Ji-Hong Zhang, Xiang-Sun Zhang. Algorithms for the SNP haplotype assembly problem. *Applied Mathematics A Journal of Chinese Universities (Series A)*, 19(S):515–528, 2004.

4. Xiang-Sun Zhang, Yong Wang, Zhong-Wei Zhan, Ling-Yun Wu and Luonan Chen. Exploring protein's optimal HP configurations by self-organizing mapping. *Journal of Bioinformatics and Computational Biology*, 3(2):385–400, 2005. (PubMed: 15852511)

5. Rui-Sheng Wang, Ling-Yun Wu, Zhen-Ping Li and Xiang-Sun Zhang. Haplotype reconstruction from SNP fragments by minimum error correction. *Bioinformatics*, 21(10):2456–2462, 2005. (SCI: 928QA, PubMed: 15731204)

6. Yu-Ying Zhao, Ling-Yun Wu, Ji-Hong Zhang, Rui-Sheng Wang and Xiang-Sun Zhang. Haplotype assembly from aligned weighted SNP fragments. *Computational Biology and Chemistry*, 29(4):281–287, 2005. (SCI: 956XI, EI, PubMed: 16051522)

7. Ji-Hong Zhang, Ling-Yun Wu and Xiang-Sun Zhang. A reconstruction algorithm to DNA sequencing by hybridization with target DNA length error. *Acta Mathematicae Applicatae Sinica*, 28(3):385–395, 2005. (in Chinese)

8. Yong Wang, Zhong-Wei Zhan, Ling-Yun Wu and Xiang-Sun Zhang. An improved self-organizing map algorithm for protein folding and its realization. *Journal of Systems Science and Mathematical Science*, 25(5):562–573, 2005. (in Chinese)

9. Luonan Chen, Ling-Yun Wu, Ruiqi Wang, Yong Wang, Shi-Hua Zhang, Xiang-Sun Zhang. Comparison of protein structures by multi-objective optimization. *Genome Informatics*, 16(2):114–124, 2005. (PubMed: 16901095)

10. Ling-Yun Wu, Xiang-Sun Zhang and Ju-Liang Zhang. Capacitated facility location problem with general setup cost. *Computers & Operations Research*, 33(5):1226–1241, 2006. (SCI: 986SU, EI)

11. Xiang-Sun Zhang, Rui-Sheng Wang, Ling-Yun Wu and Luonan Chen. Models and algorithms for the haplotyping problem. *Current Bioinformatics*, 1(1):105–114, 2006. (SCI: 138OS)

12. Yong Wang, Ling-Yun Wu, Xiang-Sun Zhang and Luonan Chen. Exploring the classification of protein structures on geometric patterns by neural networks. *International Journal of Computational Intelligence Research*, 2(1):105–109, 2006.

13. Luonan Chen, Ling-Yun Wu, Yong Wang and Xiang-Sun Zhang. Inferring protein interactions from experimental data by association probabilistic method. *Proteins: Structure, Function, and Bioinformatics*, 62:833–837, 2006. (SCI: 019XV, PubMed: 16395667)

14. Luonan Chen, Ling-Yun Wu, Yong Wang, Shi-Hua Zhang and Xiang-Sun Zhang. Revealing divergent evolution, identifying circular permutations and detecting active-sites by protein structure comparison. *BMC Structural Biology*, 6:18, 2006. (SCI: 088LQ, PubMed: 16948858)

15. Zhong-Wei Zhan, Yong Wang, Ling-Yun Wu and Xiang-Sun Zhang. A DEA evaluation model of the official province websites. *Operations Research and Management Science*, 15(4):97–102, 2006. (in Chinese)

16. Xiang-Sun Zhang, Rui-Sheng Wang, Ling-Yun Wu and Wei Zhang. Minimum conflict individual haplotyping from SNP fragments and related genotype. *Evolutionary Bioinformatics Online*, 2:271–280, 2006.

17. Zhen-Ping Li, Ling-Yun Wu, Yu-Ying Zhao and Xiang-Sun Zhang. A dynamic programming algorithm for the k-haplotyping problem. *Acta Mathematicae Applicatae Sinica (English Series)*, 22(3):405–412, 2006.

18. Rui-Sheng Wang, Ling-Yun Wu, Xiang-Sun Zhang and Luonan Chen. A Markov chain model for haplotype assembly from SNP fragments. *Genome Informatics*, 17(2):162–171, 2006. (PubMed: 17503389)

19. Yong Wang, Ling-Yun Wu, Luonan Chen and Xiang-Sun Zhang. Supervised classification of protein structures based on convex hull representation. *International Journal of Bioinformatics Research and Applications*, 3(2):123–144, 2007. (PubMed: 18048184)

20. Ji-Hong Zhang, Ling-Yun Wu, Yu-Ying Zhao and Xiang-Sun Zhang. An optimization approach to the reconstruction of positional DNA sequencing by hybridization with errors. *European Journal of Operational Research*, 182(1):413–427, 2007. (SCI, EI)

21. Rui-Sheng Wang, Yong Wang, Ling-Yun Wu, Xiang-Sun Zhang, and Luonan Chen. Analysis on multi-domain cooperation for predicting protein-protein interactions. *BMC Bioinformatics*, 8:391, 2007. (SCI, PubMed: 17937822)

22. Ju-Liang Zhang, Ling-Yun Wu and Xiang-Sun Zhang. A trust region method for optimization problem with singular solutions. *Applied Mathematics and Optimization*, 56(3):379–394, 2007. (SCI, EI)

23. Zhi-Ping Liu, Ling-Yun Wu, Yong Wang, Luonan Chen, and Xiang-Sun Zhang. Predicting gene ontology functions from protein's regional surface structures. *BMC Bioinformatics*, 8:475, 2007. (SCI, PubMed: 18070366)

24. Ruxin Qin, Jing Chen, Naiyang Deng, Ling-Yun Wu. New strategy for predicting protein structural class. *Journal of Harbin Institute of Technology (New Series)*, 14(S2):1–4, 2007. (EI)

25. Zhi-Ping Liu, Ling-Yun Wu, Yong Wang, Xiang-Sun Zhang, and Luonan Chen. Analysis of protein surface patterns by pocket similarity network. *Protein and Peptide Letters*, 15(5):448–455, 2008. (SCI, PubMed: 18537733)

26. Zhi-Ping Liu, Ling-Yun Wu, Yong Wang, Xiang-Sun Zhang, and Luonan Chen. Bridging protein local structures and protein functions. *Amino Acids*, 35(3):627–650, 2008. (SCI, PubMed: 18421562)

27. Ji-Hong Zhang, Ling-Yun Wu, Jian Chen, and Xiang-Sun Zhang. A fast haplotype inference method for large population genotype data. *Computational Statistics and Data Analysis*, 52(11):4891–4902, 2008. (SCI)

28. Zhi-Ping Liu, Ling-Yun Wu, Yong Wang, Luonan Chen, and Xiang-Sun Zhang. Protein cavity clustering based on community structure of pocket similarity network. *International Journal of Bioinformatics Research and Applications*, 4(4):445–460, 2008. (PubMed: 19008186)

29. Shu-Qin Zhang, Wai-Ki Ching, Yue Jiao, Ling-Yun Wu, and Raymond H. Chan. Construction and control of genetic regulatory networks: A multivariate Markov chain approach. *Journal of Biomedical Science and Engineering*, 1:15–21, 2008.

30. Ling-Yun Wu, Xiaobo Zhou, Fuhai Li, Xiaorong Yang, Chung-Che Chang, Stephen T.C. Wong. Conditional random pattern algorithm for LOH inference and segmentation. *Bioinformatics*, 25(1):61–67, 2009. (SCI, PubMed: 18974074)

31. Xiao-Bo Wang, Ling-Yun Wu, Yong-Cui Wang, and Nai-Yang Deng. Prediction of palmitoylation sites using the composition of K-spaced amino acid pairs. *Protein Engineering, Design, and Selection*, 22(11):707–712, 2009. (SCI)

32. Yong Wang, Ling-Yun Wu, Ji-Hong Zhang, Zhong-Wei Zhan, Xiang-Sun Zhang, and Luonan Chen. Evaluating protein similarity from coarse structures. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 6(4):583–593, 2009. (SCI)

33. Wan-Ting Huang, Xiaorong Yang, Xiaobo Zhou, Federico A. Monzon, Jianguo Wen, Jill M. Hagenkord, Ling-Yun Wu, Carolyn Keever-Taylor, Louis Novoa-Takara, Stephen T.C. Wong, Kenneth Young, and Chung-Che Chang. Multiple distinct clones may coexist in different lineages in myelodysplastic syndromes. *Leukemia Research*, 33(6):847–853, 2009. (SCI, PubMed: 19084271)

34. Ling-Yun Wu, Zhenping Li, Rui-Sheng Wang, Xiang-Sun Zhang, Luonan Chen. Self-organizing map approaches for the haplotype assembly problem. *Mathematics and Computers in Simulation*, 79(10):3026–3037, 2009. (SCI)

35. Xiaojian Shao, Yingjie Tian, Lingyun Wu, Yong Wang, Naiyang Deng. Predicting DNA- and RNA-binding proteins from sequences with kernel methods. *Journal of Theoretical Biology*, 258(2):289–293, 2009. (SCI)

36. Xiaorong Yang, Xiaobo Zhou, Wan-Ting Huang, Lingyun Wu, Federico A. Monzon, Chung-Che Chang, and Stephen T.C. Wong. Pattern-selection based power analysis and discrimination of low- and high-grade myelodysplastic syndromes study using SNP arrays. *PLoS ONE*, 4(4):e5054, 2009. (PubMed: 19352488)

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