

吴凌云

个人简历

中国科学院
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北京 100190

2019 年 1 月 23 日

简介

吴凌云, 中国科学院数学与系统科学研究院研究员, 博士生导师, 应用数学所所长助理, 生物信息学研究中心主任. 中国运筹学会常务理事, 科普工作委员会副主任, 青年工作委员会副主任, 计算系统生物学会分会副理事长. 2002 年于中国科学院数学与系统科学研究院获得运筹学与控制论专业的理学博士学位. 曾在香港科技大学和美国康奈尔大学 Weill 医学院从事过博士后研究工作. 目前的研究兴趣是运筹学与信息科学, 特别是运筹学在生物信息学与系统生物学中的应用、运筹学在物流与金融科技中的应用. 主要工作成果包括: DNA 测序算法, 蛋白质结构比对算法, 分子生物网络比对算法, 复杂疾病生物标记识别方法, 无人仓最优入库与拣选策略等. 主持过青年基金, 面上基金, 重大研究计划培育项目等多项国家自然科学基金. 2014 年获中国运筹学会科学技术奖之青年科技奖.

个人资料

姓名: 吴凌云

国籍: 中华人民共和国

出生时间地点: 1975 年 11 月 8 日, 中国福建

性别: 男

电话: +86-10-82541872

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个人主页: <http://wulab.ac.cn>

地址: 北京市海淀区中关村东路 55 号, 邮编 100190

教育经历

1997 – 2002 中国科学院数学与系统科学研究院
理学博士 运筹学专业
导师: 章祥荪研究员

1993 – 1997 武汉大学
学士 应用数学专业

目前职位

2015 – 目前 **研究员**
中国科学院数学与系统科学研究院

2016 – 目前 **主任**
中国科学院数学与系统科学研究院生物信息学研究中心

2017 – 目前

所长助理

中国科学院数学与系统科学研究院应用数学研究所

工作经历

- 1997 **软件开发 (兼职)**
武汉大学
设计开发武汉大学党委人事管理系统
- 1997 – 2002 **网络系统管理员 (兼职)**
中国科学院数学与系统科学研究院
参与设计和建设一个由超过 400 台 PC 和 30 台 Unix/Linux 服务器以及超级计算机构成的网络, 并参与后期的维护与管理.
- 2002 – 2003 **Research Associate (博士后)**
香港科技大学工业工程与工程管理系
- 2003 – 2005 **博士后**
中国科学院数学与系统科学研究院
- 2005 – 2007 **助理研究员**
中国科学院数学与系统科学研究院
- 2006 **访问学者**
复旦大学数学科学学院
- 2007 **访问学者**
香港中文大学数学系
- 2008 – 2009 **Postdoctoral Fellow**
The Methodist Hospital Research Institute, Weill Medical College
of Cornell University
- 2007 – 2015 **副研究员**
中国科学院数学与系统科学研究院
- 2007 – 2012 **副主任**
中国科学院数学与系统科学研究院应用数学研究所运筹学研究室
- 2012 – 2017 **主任**
中国科学院数学与系统科学研究院应用数学研究所运筹学研究室

资格证书

TOEFL	600 (57 63 60) TWE 4.0 (2001 年 10 月)
高级程序员	计算机软件专业技术资格和水平考试, 1996 国务院电子信息系统推广应用办公室颁发

社会活动

2009 – 至今	中国致公党, 党员
2014 – 2017	中国致公党中科院海淀支部, 委员
2017 – 至今	中国致公党中科院海淀支部, 副主委
2017 – 至今	中国致公党中科院委员会, 委员
2017 – 至今	中国致公党北京市委员会科技工作委员会, 副主任

荣誉奖励

2007	中国科学院数学与系统科学研究院十大科研进展奖
2007	王宽诚教育基金会科研奖金项目
2008	中国科学院数学与系统科学研究院十大突出科研成果奖
2014	中国运筹学会科学技术奖青年科技奖

学会组织

2012 – 目前	中国运筹学会 (ORSC), 理事
2016 – 目前	中国运筹学会 (ORSC), 常务理事
2019 – 目前	中国工业与应用数学学会 (CSIAM), 副秘书长
2011 – 目前	中国运筹学会, 计算系统生物学会, 副理事长
2017 – 目前	中国生物化学与分子生物学会, 分子系统生物学专业委员会, 委员
2018 – 目前	中国医药生物技术协会, 基因检测技术分会, 委员
2006 – 目前	中国仿真学会, 生命系统建模仿真专业委员会, 委员

期刊编委

2010 – 目前	运筹与管理
2016 – 目前	Scientific Reports

期刊审稿

- 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
- 应用数学学报
- 数学研究与评论
- 系统科学与数学
- 运筹学报
- 自然科学进展
- 计算机工程与应用

会议服务

- | | |
|------|--|
| 1999 | 会务组志愿者
第 15 届国际运筹学会联合会大会, 北京, 1999 年 8 月 16 日至 20 日. |
| 2002 | 组织委员会
第 4 届运筹学及其应用国际研讨会 (ISORA), 三峡, 宜昌-重庆, 2002 年 6 月 1 日至 4 日. |
| 2002 | IT 服务管理
第 24 届国际数学家大会 (ICM), 北京, 2002 年 8 月 20 日至 28 日. |

- 2004 **组织委员会**
中国运筹学会第 7 届全国代表大会暨学术交流会, 青岛, 2004 年 10 月 16 日至 20 日.
- 2005 **组织委员会**
第 5 届运筹学及其应用国际研讨会 (ISORA), 西藏, 拉萨-林芝, 2005 年 8 月 8 日至 13 日.
- 2006 **组织委员会**
中国运筹学会第 8 届学术交流会, 深圳, 2006 年 6 月 29 日至 7 月 2 日.
- 2006 **组织委员会**
第 6 届运筹学及其应用国际研讨会 (ISORA), 新疆, 乌鲁木齐, 2006 年 8 月 8 日至 12 日.
- 2007 **组织委员会**
第 1 届优化与系统生物学国际研讨会 (OSB), 北京, 2007 年 8 月 7 日至 9 日.
- 2007 **程序委员会**
2007 年智能计算国际会议 (ICIC), 青岛, 2007 年 8 月 21 日至 24 日.
- 2007 **程序委员会**
第 2 届生命系统建模与模拟国际会议 (LSMS), 上海, 2007 年 9 月 14 日至 17 日.
- 2008 **程序委员会**
2008 年智能计算国际会议 (ICIC), 上海, 2008 年 9 月 15 日至 18 日.
- 2008 **组织委员会**
第 2 届优化与系统生物学国际研讨会 (OSB), 云南, 丽江, 2008 年 10 月 31 日至 11 月 3 日.
- 2009 **程序委员会**
2009 年智能计算国际会议 (ICIC), 韩国, 蔚山, 2009 年 9 月 16 日至 19 日.

- 2009 **组织委员会**
第 3 届优化与系统生物学国际研讨会 (OSB), 湖南, 张家界, 2009 年 9 月 20 日至 22 日.
- 2009 **组织委员会**
第 8 届运筹学及其应用国际研讨会 (ISORA), 湖南, 张家界, 2009 年 9 月 20 日至 22 日.
- 2010 **程序委员会**
2010 年智能计算国际会议 (ICIC), 湖南, 长沙, 2010 年 8 月 18 日至 21 日.
- 2010 **组织委员会**
第 9 届运筹学及其应用国际研讨会 (ISORA), 四川, 九寨沟, 2010 年 8 月 20 日至 24 日.
- 2010 **组织委员会**
第 4 届计算系统生物学国际会议 (ISB), 江苏, 苏州, 2010 年 9 月 9 日至 11 日.
- 2011 **组织委员会**
第 10 届运筹学及其应用国际研讨会 (ISORA), 甘肃, 敦煌, 2011 年 8 月 28 日至 31 日.
- 2011 **组织委员会**
第 5 届 IEEE 系统生物学国际会议 (ISB), 广东, 珠海, 2011 年 9 月 2 日至 4 日.
- 2012 **组织委员会**
第 6 届 IEEE 系统生物学国际会议 (ISB), 陕西, 西安, 2012 年 8 月 18 日至 20 日.
- 2012 **组织委员会**
中国运筹学会第九次全国代表大会暨 2012 年学术交流年会, 辽宁, 沈阳, 2012 年 10 月 19 日至 22 日.
- 2013 **组织委员会**
第 11 届运筹学及其应用国际研讨会 (ISORA), 安徽, 黄山, 2013 年 8 月 23 日至 25 日.

- 2013 **组织委员会**
第 7 届系统生物学国际会议 (ISB), 安徽, 黄山, 2013 年 8 月 23 日至 25 日.
- 2014 **组织委员会**
中国运筹学会 2014 年学术交流年会, 江苏, 徐州, 2014 年 10 月 17 日至 20 日.
- 2014 **组织委员会**
第 8 届系统生物学国际会议暨第 4 届转化生物信息学会议 (ISB/TBC), 山东, 青岛, 2014 年 10 月 24 日至 27 日.
- 2015 **组织委员会**
第 12 届运筹学及其应用国际研讨会 (ISORA), 河南, 洛阳, 2015 年 8 月 21 日至 24 日.
- 2015 **组织委员会**
第 9 届系统生物学国际会议 (ISB), 河南, 洛阳, 2015 年 8 月 21 日至 24 日.
- 2016 **组织委员会**
第 10 届系统生物学国际会议 (ISB), 山东, 威海, 2016 年 8 月 19 日至 22 日.
- 2016 **组织委员会**
中国运筹学会第十次全国代表大会暨 2016 年学术交流年会, 云南, 昆明, 2016 年 10 月 13 日至 17 日.
- 2017 **组织委员会**
第 11 届计算系统生物学国际会议 (ISB), 广东, 深圳, 2017 年 8 月 18 日至 21 日.
- 2018 **程序委员会主席**
第 12 届计算系统生物学国际会议 (ISB), 贵州, 贵阳, 2018 年 8 月 18 日至 21 日.

学术报告 & 课程

- 2000 **邀请报告**
日本运筹学会秋季年会, 亚太运筹学会 (APORS) 国际专题, 日本, 东京, 2000 年 9 月 27 日至 28 日.
- 2001 **Poster 报告**
Application of discrete Hopfield-type neural networks for max-cut problems
第 8 届神经信息处理国际会议 (ICONIP 2001), 上海, 2001 年 11 月 14 日至 18 日.
- 2006 **学术讲座课程**
生物信息学
复旦大学数学科学学院
上海, 2006 年 10 月。
- 2007 **学术讲座课程**
生物信息学
香港中文大学数学系
香港, 2007 年 5 月.
- 2009 **学术报告**
Semi-supervised Drug-Protein Interaction Prediction from Heterogeneous Spaces
第 3 届优化与系统生物学国际研讨会 (OSB 2009), 张家界, 湖南, 2009 年 9 月 20 日至 22 日.
- 2009 **学术报告**
Conditional Random Fields Approach for LOH Inference
日本京都大学化学研究所生物信息学中心
日本, 京都, 2009 年 12 月 10 日.
- 2009 **学术报告**
Conditional Random Fields Approach for LOH Inference
日本产业技术综合研究所 (AIST) 计算生物学研究中心 (CBRC)
日本, 东京, 2009 年 12 月 11 日.

2009

Poster 报告

Identifying Functional Motifs on Protein Surfaces by Structural Alignment with Sequence Information

第 20 届基因组信息学国际会议 (GIW 2009), 日本, 横滨, 2009 年 12 月 14 日至 16 日.

2010

Poster 报告

An Efficient Network Querying Method Based on Conditional Random Fields

第 21 届基因组信息学国际会议 (GIW 2010), 中国, 杭州, 2010 年 12 月 15 日至 18 日.

研究兴趣

- 生物信息学
- 系统生物学
- 组合优化
- 人工神经网络
- 运筹学应用

项目

1999 – 2002	生物信息学中的重要数学问题 中国科学院数学与系统科学研究院资助.
1999 – 2002	神经网络在最优化中的应用 中国科学院数学与系统科学研究院资助.
2001	昆明中学教育水平评估 中国科学院研究生研究计划资助.
2002 – 2003	Decision Support Tools for Intelligent Multi-modal Transportation Logistics Management Systems 香港科技大学工业工程与工程管理系研究项目, 香港创新及技术基金 (Hong Kong Innovation Technology Fund) 资助.
2004 – 2005	中国电子政务战略规划研究 国务院信息化工作办公室资助.
2007 – 2008	税收收入预测方法研究 国家税务总局计划统计司资助.
2009 – 2010	安全生产数据挖掘与模型构建研究 北京市劳动保护科学研究所资助.
2009 – 2010	城市公共设施事故应急的多部门协同决策模型研究 北京城市系统工程研究中心资助.

- 2017 – 2019 **高效区块链网络技术研究**
北京太一云科技有限公司资助.
- 2017 – 2018 **无人仓最优入库与拣选策略**
北京京东世纪贸易有限公司资助.

基金

- 2004 – 2005 **DNA 测序算法研究**
负责人, 研究基金, No. 20040350428
中国博士后科学基金会
- 2004 – 2006 **供应链设计与管理的建模与优化**
主要成员, 青年基金, No. 70302003
国家自然科学基金委员会
- 2005 – 2007 **运筹学在生物信息学若干问题上的应用**
主要成员, 面上项目, No. 10471141
国家自然科学基金委员会
- 2005 – 2008 **生物信息学中的一些重要问题**
主要成员, 知识创新工程重要方向项目
中国科学院
- 2006 – 2008 **生物信息学中的单体型推断模型与算法研究**
负责人, 青年基金, No. 60503004
国家自然科学基金委员会
- 2007 – 2009 **基于三维结构和高通量数据的蛋白质功能标注与预测研究**
主要成员, 国际（地区）合作研究与交流项目, No. 10711140116
国家自然科学基金委员会
- 2007 – 2010 **生物信息学与最优化方法**
主要成员, 重点项目, No. 10631070
国家自然科学基金委员会
- 2007 – 2011 **2 型糖尿病发生过程中的分子网络与作用机制研究**
参加人员, 973 项目子课题, No. 2006CB503910

- 2 型糖尿病发生发展的分子机制研究
973 项目, No. 2006CB503900
中国科技部
- 2008 单核苷酸多态性 (SNP) 芯片数据分析方法
独立承担, 科研奖金项目
香港王宽诚教育基金会
- 2009 – 2012 优化方法及其在信息技术中的应用
主要成员, 知识创新工程重要方向项目, No. kjcx-yw-s7
中国科学院
- 2010 – 2012 基于条件随机场的生物信息学方法
负责人, 面上项目, No. 60970091
国家自然科学基金委员会
- 2012 – 2016 复杂网络中的优化问题及其在系统生物学中的应用
主要成员, 重点项目, No. 11131009
国家自然科学基金委员会
- 2014 – 2016 动态网络生物标记识别的可计算建模与算法
负责人, 重大研究计划培育项目, No. 91330114
国家自然科学基金委员会
- 2017 – 2021 图理论和算法研究及其在生物信息学中的应用
主要成员, 重点项目, No. 11631014
国家自然科学基金委员会
- 2017 – 2019 癌症基因组大数据深度分析中的优化建模和算法研究
主要成员, 国际 (地区) 合作研究与交流项目, No. 11661141019
国家自然科学基金委员会
- 2018 – 2019 干细胞增殖的计算建模及其在癌症演变动力学的应用
主要成员, 重大研究计划集成项目, No. 91730301
国家自然科学基金委员会

书

1. *Operations Research 50 周年纪念特刊中文译本*
主编: 章祥荪, 刘德刚, 章璟, 吴凌云, 王勇. 运筹与管理, 增刊, Vol. 13, 2004.
2. 信贷资产组合管理 (Credit Portfolio Management 中文译本)
Charles Simithson. 翻译: 张继红, 陈德胜, 吴凌云, 常良峰. 中国人民大学出版社, 北京, 2006.

论文集

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. 中国运筹学会第 8 届学术交流会论文集
主编: 袁亚湘, 胡晓东, 刘德刚, 吴凌云. Global-Link Publishing Company, Hong Kong, 2006.
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. 中国运筹学会第 10 届学术交流会论文集
主编: 袁亚湘, 胡晓东, 吴凌云, 刘德刚. Global-Link Publishing Company, Hong Kong, 2010.
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
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