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清华大学理论计算机科学研究中心

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登录 　搜索

中心概况　师资队伍　科研管理　本科生　研究生　联合中心　国际交流　国际会议　成果展示　论文发表　课程讲座　新闻动态　办事指南

清华大学理论计算机科学研究中心

王跃宣

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研究方向: 网络科学，量子网络

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教育背景

2000年3月-2003年3月	浙江大学，控制科学与工程学系，控制科学与工程，工学博士

工作经历

2012年7月至今	清华大学交叉信息研究院教授，博士生导师，党支部书记
2010年12月至2012年6月	清华大学交叉信息研究院副院长、教授、博士生导师
2009年12月至2010年12月	清华大学理论计算机科学研究中心副主任、教授、博士生导师
2006年6月至2009年12月	清华大学理论计算机科学研究中心副主任、副教授
2009年1月至2009年3月	美国德州达拉斯大学，访问教授
2007年6月至2007年9月	美国阿贡国家实验室，访问学者
2007年1月至2007年3月	香港中文大学，访问学者
2006年2月至2006年6月	清华大学自动化系，助理教授
2003年4月至2006年2月	清华大学自动化系，博士后

研究方向

网络科学，量子网络

科研项目

	项目名称	时间	职务
9	全量子网络物理平台及量子算法演示，973重大科学问题导向项目课题（编号: 2011CBA00302)	2011年01月至2015年08月	课题负责人
8	结合压缩采样与网络编码的无线传感器网络负载均衡与节能关键技术研究，国家自然科学基金面上项目（编	2011年01月至2013年12月	项目负责人

号:61073174)

7	量子网络平台20年计划,中国工程科技中长期发展战略研究联合基金 (编号: U0970121)	2009年11月 至 2010年7月	项目负责人
6	安全计算学重大理论问题研究，国家重点基础研究发展计划 (973项目) (编号:2007CB807900)	2007年5月至2012年8月	子课题负责人
5	农业生物－环境信息获取无线传感器网络技术研究，中国高技术研究发展计划 (863项目) (编号: 2006AA10Z216)	2006年12月至2010年10月	项目负责人
4	面向可溯源的设备网格服务链模型推理和验证研究，国家自然科学基金面上项目 (编号: 60604033)	2007年1月至2009年12月	项目负责人
3	基于Pi演算和模型验证技术的设备网格服务链可靠性研究，西安交通大学开放研究基金（编号:ZR20060701）	2007年1月至2008年12月	项目负责人
2	面向设备资源共享的仿真网格技术平台研究，中国博士后科学基金 (编号:2003024155)	2003年11月至2006年2月	项目负责人
1	贵重仪器设备网上共享与管理分系统，"十五" 211项目（编号:"十五" 211 CERS-06）	2003年4月至2006年2月	课题负责人

博士后

在站博士后：

- 谈海生
- 宁超

已出站博士后：

- 王永才

学生

在读博士：

- 戚啸   2011级
- 顾钊铨 2011级
- 张喆   2011级
- 戴卫国 2011级
- 宋磊   2011级

在读硕士：

- 许力文 2009级
- 韩安德 2009级
- 王冠宇 2010级
- 陈锦标 2010级
- 郝霄虹 2010级
- 张晨   2011级
- 吕曰洲 2011级
- 陈杉   2011级
- 严马可 2011级

2012年入学博士：

- 曹锐创
- 周梦宇
- 林肖
- 程勇
- 许梦雯
- 王栋
- 周忠军
- 吕定顺
- 沈杨超

2012年入学硕士：

- 杨质祺

已毕业博士:

殷杰，工作单位：深圳出入境检验检疫局

课程

1. 计算机应用数学，一年级春季学期

任课教师：姚期智、王跃宣

该课程面向计算机科学本科专业介绍基本数学技巧，以及这些技巧怎样在计算机科学中应用。现代计算机科学教育需要学生掌握宽阔的数学知识，并能灵活和创新地解决现在和将来的科技挑战。在这项课程中，数学技巧主要涵括代数、几何、概率理论、随机模型、信息理论等。这些技巧将应用于不同专题的问题和算法设计，包括互联网、无线传感网、密码学、分布式系统、算法设计和优化等。最后，该课程向学生介绍在计算理论基础方面深层次的科学问题，如不可解性、复杂性和量子计算。

2. 程序设计与算法基础，二年级秋季学期

任课教师：王跃宣

本课程假设学生已经具备了最基本的程序语言知识，例如函数、循环、数组等。课程的主要内容包括：**C/C++**基本程序设计概念（过程程序设计、面向对象程序设计）、计算机数据结构（链表、栈、队列、树等）、与这些数据结构相关的常用算法，以及一些经典的程序设计模式（引用计数、虚拟构造器等）。

3.专题训练实践,三年级夏季学期

任课教师：王跃宣
本课程设在大三年级夏季学期，是为大四年级的《计算机科学研究实践》和《综合论文训练》做准备。在该课程中，设置了算法理论、量子网络、复杂性研究、密码及安全、博弈论等专题，并根据学生的兴趣安排进入各专题训练小组进行专题研讨和实践，使学生在实际动手能力、创新思维、团队合作精神等方面得到锻炼和提高。

获奖情况

2004年 清华大学国家CIMS工程技术研究中心, 博士后科研奖

会议委员

- Quantum Information Processing 2013 (QIP 2013), Organization Chair, *Beijing, China*, January 20-26, 2013.
- The 8th International Symposium on Algorithms for Sensor Systems, Wireless Ad Hoc Networks and Autonomous Mobile Entities (ALGOSENSORS 2012), Program Committee, *Ljubljana, Slovenia,* September, 2012.
- The 7th International Conference on Wireless Algorithms, Systems, and Applications (WASA 2012), Technical Program Committee (TPC), *Huangshan, China*, August 8-10, 2012.
- International Advanced Research Workshop on High Performance Computing, Grids and Clouds 2012 (HPC 2012),Program Committee Member,*Cetraro, Italy*, June 25 – 29, 2012.
- 2012 American Association for the Advancement of Science (AAAS) Annual Meeting, co-organizer, *Vancouver, Canada*, February 16-20, 2012.
- China Theory Week 2011, co-PC Chair, *Aarhus, Denmark,* October 10-14, 2011.
- The Fifth China Wireless Sensor Network Conference (CWSN2011), co-PC Chair, *Beijing, China,* September 26-27, 2011.
- 2011 Quantum Summer School, Program Chair, *Beijing, China,* July 4-9, 2011.
- Trends in Theoretical Cryptography (TTC2011),Organization Chair, *Beijing, China,* January 10-12, 2011.
- Innovations in Computer Science (ICS2011), Organization Chair, *Beijing, China,* January 6-9, 2011.
- The 4th International Conference on Combinatorial Optimization and Applications (COCOA 2010), Program Committee Member, *The Big Island, Hawaii, USA ,* December 18-20, 2010.
- 2010 APSIPA Annual Summit and Conference (APSIPA ASC 2010), Technical Program Committee, *Biopolis, Singapore,* December 15-17, 2010.
- The 11th International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT-10), PC member, *Wuhan, China,*, December 8-11, 2010.
- 2010 IEEE Asia-Pacific Services Computing Conference (APSCC-2010), Program Committee, *Hangzhou, China,* December 6-10, 2010.
- Embedded Systems Week 2010(ESWEEK 2010), CASES 2010 program co-chair, *Scottsdale, AZ,* October 24-29, 2010.
- China Theory Week 2010, Organization Chair, Beijing, China, September 12-17, 2010.
- International Conference on Wireless Algorithms, Systems, and Applications(WASA 2010), Technical Program Committee (TPC), *Beijing, China,* August 15-17, 2010.
- ITCS mini-workshop on Property Testing, Organization Chair, *Beijing, China,* January 8-10, 2010.
- Innovations in Computer Science (ICS), Organization Chair, *Beijing, China,* January 5-7, 2010.
- 2009 IEEE Asia-Pacific Services Computing Conference (IEEE APSCC 2009), Technical Program Committee (TPC), *Biopolis, Singapore,* December 7-11, 2009.
- The Symposium China Computer Science Vision 2020, Program Chair, *Beijing, China,* October 12-15, 2009.
- 2009 APSIPA Annual Summit and Conference (APSIPA ASC 2009), Ubiquitous and mobile computing TPC Member, *Sapporo Convention Center, Sapporo, Japan,* October 4-7, 2009.
- China Theory Week 2009 ,Program Chair, *Beijing, China, September 20-25, 2009.*
- The International Conference on Wireless Algorithms, Systems and Applications (WASA'09), *Boston, MA, USA, August 16-18, 2009.*
- 7th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt'09), *Seoul, Korea,* June 23-27, 2009.
- The 4th International Conference on Mobile Ad-hoc and Sensor Networks (MSN'08), *Lake View Hotel, Wuhan, China,* Dec 10-12, 2008.
- The First China Symposium on Theoretical Computer Science,Program Chair,*Beijing, China, October 12-17, 2008.*

- China Theory Week 2008 ,Program Chair, *Beijing, China, September 21-27, 2008.*
- The 9th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc'08), *Hong Kong,* May 26-30, 2008.
- China Theory Week 2007 ,Program Chair, *Beijing, China, September 17-21, 2007.*
- PKC07, Program Committee (TPC),*Beijing, China, April 16-20, 2007.*

论文发表

47 Chong Zu, Yuexuan Wang, Xiuying Chang, Zhaohui Wei, Shangyu Zhang, Luming Duan. Experimental demonstration of quantum gain in a zero-sum game. New Journal of Physics, Accepted, 2012

46 Yongcai Wang, Lei Song, Yuexuan Wang, Xiao Qi, Haisheng Tan. For Robustness of Ultrasound TOA-based Indoor Localization. The 2012 IEEE International Conference on Communications (ICC 2012), June 10-15, 2012, Ottawa, Canada

45 Changcun Ma, Deying Li, Hongwei Du, Huan Ma, Yuexuan Wang, Wonjun Lee. Energy Efficient Broadcast in Multiradio Multichannel Wireless Networks. The 31st Annual IEEE International Conference on Computer Communications (IEEE INFOCOM 2012), March 25-30, 2012, Orlando, Florida USA

44 Qiang-Sheng Hua, Yuexuan Wang, Dongxiao Yu, Haisheng Tan. Minimum Latency Links Scheduling for Arbitrary Directed Acyclic Networks under Precedence and SINR Constraints. Journal of Interconnection Networks, Vol. 12, Nos. 1&2, pp. 85-107, 2011

43 Haisheng Tan, Tiancheng Lou, Yuexuan Wang, Qiang-Sheng Hua, Francis C.M. Lau. Exact algorithms to minimize interference in wireless sensor networks. Theoretical Computer Science, Vol. 412, pp. 6913-6925, 2011

42 Chenye Wu, Hamed Mohsenian-Rad, Jianwei Huang, Yuexuan Wang. Demand Side Management for Wind Power Integration in Microgrid Using Dynamic Potential Game Theory. The First IEEE International Workshop on Smart Grid Communications and Networks (SG-COMNETS 2011, IEEE GLOBECOM 2011 Workshop on SG-COMNETS), December 5-9, Houston, Texas, USA

41 Liwen XU, Yuexuan WANG, Yongcai WANG.Major Coefficients Recovery: a Compressed Data Gathering Scheme for Wireless Sensor Network,Global Communications Conference 2011, (GLOBECOM2011),December5-9,2011, Houston, Texas, USA

40 Dongxiao Yu, Yuexuan Wang, Qiang-Sheng Hua and Francis C. M. Lau. Distributed (Δ+1)-Coloring in the Physical Model. The 7th International Symposium on Algorithms for Sensor Systems, Wireless Ad Hoc Networks and Autonomous Mobile Entities (ALGOSENSORS 2011), pp. 145-160, September 8-9, 2011, Saarbruecken, Germany

39 Tiancheng Lou, Haisheng Tan, Yuexuan Wang and Francis Lau. Minimizing Average Interference Through Topology Control. The 7th International Symposium on Algorithms for Sensor Systems, Wireless Ad Hoc Networks and Autonomous Mobile Entities (ALGOSENSORS 2011), pp. 115-129,September 8-9, 2011, Saarbruecken, Germany

38 Feng Zou; Yuexuan Wang; Xiao-Hua Xu; Xianyue Li; Hongwei Du; Pengjun Wan;Weili Wu. New Approximations for Minimum-Weighted Dominating Set and Minimum-Weighted Connected Dominating Set on Unit Disk Graphs. Theoretical Computer Science, 412(3): 198-208, January 2011

37 Deying Li; Yuexuan Wang; Qinghua Zhu; Huiqiang Yang. Fault-tolerant routing: k-inconnected Many-to-One Routing in Wireless Networks. Theoretical Computer Science, 412 (3): 209-216, January 2011

36 Dongxiao Yu, Yuexuan Wang, Qiang-Sheng Hua, Francis C.M. Lau. Exact Parameterized Multilinear Monomial Counting via k-layer Subset Convolution and k-Disjoint Sum. The 17th Annual International Computing and Combinatorics Conference (COCOON 2011), August 14-16, 2011, Dallas, Texas, USA

35 Yuexuan Wang, Yongcai Wang. Distributed Storage and Parallel Processing in Large-Scale Wireless Sensor Networks. Chapter of "High Performance Scientific Computing with Special Emphasis on Current Capabilities and Future Perspectives", IOS press, 2011

34 Yu Dongxiao, Amy Yuexuan Wang, Qiang-Sheng Hua and Francis C.M. Lau. Distributed Local Broadcasting Algorithms in the Physical Interference Model. The 7th IEEE International Conference on Distributed Computing in Sensor Systems (IEEE DCOSS '11), June 27-29, 2011, Barcelona, Spain

33 Haisheng Tan, Tiancheng Lou, Francis C.M. Lau, Yuexuan Wang, Shiteng Chen. Minimizing Interference for the Highway Model in Wireless Ad-Hoc and Sensor Networks. The 37th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2011), pp. 520-532, January 22-28, 2011, Novy Smokovec, Slovakia

32 Yongcai Wang, Yuexuan Wang, Xiao Qi, Liwen Xu, Guided-Evolving:Convergence to Globally Optimal Load Balance by Distributed Computing using Local Information, MobiCom 2010 (Demo)

31 Yongcai Wang ,Yuexuan Wang, Xiao Qi, Liwen Xu, Jinbiao Chen, Guanyu Wang. L3SN: a Level-based, Large-scale, Longevous Sensor Network System for Agriculture Information Monitoring. Wireless Sensor Network , Vol. 2, pp.655-660, 2010

30 Haisheng Tan, Yuexuan Wang, Xiaohong Hao, Qiang-Sheng Hua, Francis C.M. Lau. Arbitrary Obstacles Constrained Full Coverage in Wireless Sensor Networks. WASA 2010, LNCS 6221, pp. 1-10, August 15-17, 2010, Beijing, China

29 Qiang Sheng Hua, Yuexuan Wang,Dongxiao Yu; Francis C.M. Lau. Dynamic Programming Based Algorithms for Set Multicover and Multiset Multicover Problems. Theoretical Computer Science, Vol. 411,Issues 26-28, pp. 2467-2474,2010

28 Yuexuan Wang, Yin Jie, Meizhi Hu. A Scheduling Method for Service Chain in Equipment Grid. 2009 IEEE Congress on Services, Part I, (Services-I 2009), pp. 38-45, July 6-10, 2009, Los Angeles, California, USA

27 Yuexuan Wang, Meizhi Hu and Jie Yin. A predictive admission control algorithm for user advance reservation in equipment grid. International Journal of Business Process Integration and Management (IJBPIM), Vol.4,No.4,pp.274-283,2009

26 Yuexuan Wang, Yongcai Wang, Xiao Qi, Liwen Xu. OPAIMS:Open Architecture Precision Agriculture Information Monitoring System. 2009 International Conference on Compilers, Architecture, and Synthesis for Embedded Systems (CASES'09), pp. 233-239, Oct. 11-16, 2009, Grenoble, France

25 Weiwei Lang, Yuexuan Wang, James Yu, Suogang Gao, Weili Wu. Error-Tolerant Trivial Two-Stage Group Testing for Complexies Using Almost Separable and Almost Disjunct Matrices. Discrete Mathematics, Algorithms and Applications, 1(2),pp.235-251,2009

24 Yuexuan Wang, Yin Jie, Meizhi Hu. A Scheduling Method for Service Chain in Equipment Grid. 2009 IEEE Congress on Services, Part I, (Services-I 2009), pp. 38-45, July 6-10, 2009, Los Angeles, California, USA

23 Qiang-Sheng Hua, Yuexuan Wang, Dongxiao Yu, Francis C.M. Lau. Set Multi-Covering via Inclusion-Exclusion. Theoretical Computer Science, 410(38-40), pp.3882-3892, 2009

22 Changcun Ma, Donghyun Kim, Yuexuan Wang, Wei Wang, Nassim Sohaee and Weili Wu. Hardness of k-Vertex Connected Subgraph Augmentation Problem. Journal of Combinatorial Optimization (JOCO), Volume 20, Number 3, pp. 249-258, 2010

21 Jun Guo, YuexuanWang, Suogang Gao, Jiangchen Yu, WeiliWu. Constructing error-correcting pooling designs with symplectic space. Journal of Combinatorial Optimization (JOCO), Volume 20, Number 4, pp. 413-421, 2010

20 Xiaofeng Gao, Yuexuan Wang, Xianyue Li, Weili Wu. Analysis on Theoretical Bounds for Approximation Domination Set Problems. Discrete Mathematics, Algorithms and Applications, 1(1),pp.71-84,2009

19 Jie Yin, Yuexuan Wang, Cheng Wu, Application of provenance service in equipment grid, Journal of Tsinghua University (Science and Technology) , Vol.48, No.7, 1225-1228, 2008, EI:20083111424547

18 Jie Yin, Yuexuan Wang, Cheng Wu. Predictive Admission Control Algorithm for Advance Reservation in Equipment Grid. The 2008 IEEE International Conference on Services Computing (SCC 2008), pp. 49-56, July 8-11, 2008, Honolulu, Hawaii, USA

17 Ke Xu, Yuexuan Wang, Cheng Wu. Formal verification technique for grid service chain model and its application. Science in China Series F: Information Sciences, vol.50, no.1, pp. 1-20, 2007

16 Jie Yin, Yuexuan Wang, Cheng Wu. An approach to build accessible grid service. The 8th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD 2007), pp. 423-428, July 30 - August 1, 2007, Qingdao, China

15 Jie Yin, Yuexuan Wang, Cheng Wu. A fuzzy scheduling method in equipment grid. The 6th International Conference on Machine Learning and Cybernetics (ICMCL 2007), pp.

3099-3103, Aug. 19-22, 2007, Hong Kong

14 Jie Yin, Junwei Cao, Yuexuan Wang, Lianchen Liu, and Cheng Wu. Scheduling remote access to scientific instruments in cyberinfrastructure for education and research. The 7th IEEE International Symposium on Cluster Computing and the Grid (CCGrid 2007), pp. 426-436, May 14-17, 2007, Rio de Janeiro, Brazil

13 Ensuring Secure and Robust Grid Applications-From a Formal Method Point of View. GPC2006, LNCS3947, pp. 537-546, 2006, Taiwan. Xu Ke, Wang YueXuan, Wu Cheng. SCI:BEK24, EI:20062910004752

12 Service Provenance based Abstraction of Grid Application Knowledge，Ke Xu, Yuexuan Wang, and Cheng Wu. The 2nd International Conference on Semantics, Knowledge and Grid (SKG2006), November 1-3, 2006, Guilin, China, EI:20082511322559

11 Aspect Oriented Region Analysis for Efficient Equipment Grid Application Reasoning. Ke Xu, Yuexuan Wang, and Cheng Wu. The 5th International Conference on Grid and Cooperative Computing (GCC2006), pp. 28-31, October. 21- 23, 2006, Changsha, Hunan, China, EI:20080611078398

10 Study on π-Calculus Based Equipment Grid Service Chain Model. Yuexuan Wang, Cheng Wu. IFIP International Conference on Network and Parallel Computing (NPC 2005). LNCS 3779, pp.40-47, 2005, Beijing. SCI: BDQ15, EI: 2006269970490

9   Study on Equipment Interoperation Chain Model in Grid Environment. Yuexuan Wang, Cheng Wu. Third International Symposium on Parallel and Distributed Processing and Applications (ISPA-2005). LNCS 3758, pp. 588-595, 2005, Nanjing. SCI:BDJ13, EI: 2006219894388

8   An Efficient Content-Based Notification Service Routed over P2P Network, Xixiang Hu, Yuexuan Wang, and Yunhe, Pan. The Fourth International Conference on Grid and Cooperative Computing(GCC2005), LNCS 3795, pp. 884-894,2005, Beijing. SCI: BDQ17, EI: 2006229908961

7   Constrained Multi-objective Optimization Evolutionary Algorithm. Wang Yuexuan, Liu Lianchen, Mu Shengjing, Wu Cheng.Tsinghua Science and Technology. Vol.45, No.7, pp.103-106, Jan. 2005. EI: 2005139014242

6   Research on equipment resource scheduling in grids. Yuexuan Wang, Lianchen Liu, Cheng Wu. The Third International Conference on Grid and Cooperative Computing (GCC 2004). LNCS 3251. pp. 927-930, 2004.10, SCI: BBE85

5   Annealing-genetic Algorithm for Constrained Optimization Problems. Wang Yuexuan, Wu Cheng, Hu Xixiang, Mu Shengjing, Liu Lianchen. High Technology Letters. Vol. 14. No.7. pp.10-14. EI: 2004388367196

4   The Study of Equipment Grid Based on Simulation Modeling, Wang Yuexuan, Wu Cheng, Hu Xixiang, Liu Lianchen. Computer Integrated Manufacturing Systems (CIMS),Vol. 10, No. 9: pp.1031-1035, Sep. 2004.. EI: 2004538754232

3   Heuristic Algorithms for Large Flowshop Scheduling Problems. Li Xiaoping, Wang Yuexuan, Wu Cheng. In Proceedings of the 5th World Congress on Intelligent Control and Automation, June 15-19, 2004, Hangzhou, P.R. China 2004, Vol. 4, 2999-3003. EI:2004388367940

2   A Parameter Dispersion Based Global Identification Method and Its Application. Yuexuan Wang, Hu Xixiang, Xiaoping Li, Wu Cheng. The 5th World Congress on Intelligent Control and Automation. Vol. 4, pp.294-298, 2004.6. EI: 2004388368618

1   The Study on Simulation grid Technology for Equipment Resource Sharing System. Wang Yuexuan, Liu Lianchen, Hu Xixiang, Wu Cheng. In Proceedings of the 5th World Congress on Intelligent Control and Automation, June 15-19, 2004, Hangzhou, P.R. China 2004, Vol. 4, pp.3235-3239. EI: 2004388367992