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I. Education

August 2002 – Present *Ph.D. in Computer Science expected in May 2010 (GPA: 3.94)*
Graduate Center (GC), City University of New York (CUNY)
Advisor Professor Simon Parsons
Thesis Automated Auction Mechanism Design with Competing Markets

September 1996 – March 1999 *Master of Engineering in Computer Science (With Honors, 82/100)*
Beijing University of Aeronautics and Astronautics (BUAA), China
Advisor Professor Aihua Ren
Thesis An Approach to Concurrent Software Development Based on Object-Oriented Petri Nets

September 1992 – July 1996 *Bachelor of Science in Computer Science (With Honors, 91/100)*
Shandong University (SDU), China

II. Work Experience

January 2010 – March 2010 *Research Fellow*
School of Computer Science
University of Birmingham

July 2004 – December 2009 *Research Assistant*
Agent Laboratory, Department of Computer Science
Graduate Center, City University of New York

June 2008 – December 2008 *Research Intern*
Search and Advertisement Sciences
Yahoo! Labs

January 2005 *Lecturer*
Working Connections IT Faculty Development Institute
City University of New York

September 2003 – June 2004 *Adjunct Faculty*
Department of Computer Science
City College of New York (CCNY), City University of New York

August 2002 – June 2004 *Research Assistant*
Center for Algorithms and Interactive Scientific Software
City College of New York, City University of New York

March 1999 – February 2001 *Research Fellow, Group Lead*
Home Network Group, Digital Technology Division
Institute of Computing Technology (ICT)
Chinese Academy of Sciences (CAS)

September 1996 – March 1999 *Research Assistant*
Department of Computer Science
Beijing University of Aeronautics and Astronautics

III. Awards and Honors

Academic honors

- Finalist of the First Trading Agent Competition on Ad Auctions (TAC/AA), July 2009.
- Best Paper Award, Joint International Conferences on Asia-Pacific Web Conference (APWeb) and Web-Age Information Management (WAIM), April 2009.
- Best Student Paper Award to our paper at the Seventh IASTED International Conference on Software Engineering and Applications (SEA), CS-GC-CUNY, December 2003.
- Award for Excellence in Science and Technology, Ministry of Aeronautics of China, February 1999.

Scholarships

- University and Science Fellowship, GC-CUNY, 2002 – 2009.
- Student Scholarship, International Joint Conference on Autonomous Agents and Multi-Agent Systems (AA-MAS), 2006 and 2008.
- Student Travel Award, GC-CUNY, 2003, 2006, 2008, 2009, and 2010.
- Technology Fellowship, GC-CUNY, September 2004 – January 2005.
- Graduate Scholarship, BUAA, 1996 – 1999.
- First Prize of Undergraduate Scholarship (Top 1%), SDU, 1992 – 1996.

Other honors

- Outstanding Employee (Top 3%), ICT-CAS, 2000.
- Graduate with Honors, BUAA, February 1999.
- Graduate with Honors (Top 2%), SDU, June 1996.
- Qilu (Shandong) Culture and Economy Consortium Award (Top 1%), SDU, May 1996.
- Eligibility of entering a graduate school exempt of the China Graduate Entrance Exam, SDU, October 1995.
- Special Admission Award (Top 3 in an enrollment of 2000+ students), SDU, September 1992.

IV. Services

Conference, workshop, and competition organization

- European Conference on Artificial Intelligence (ECAI).
 - 2010: Program Committee.
- Workshop on Trading Agent Design and Analysis (TADA).
 - 2009: Program Committee.
- International Workshop on Market-Based Control (MBC).
 - 2008: Program Committee.
- Trading Agent Competition on Market Design (CAT).
 - 2007, 2008, and 2009: Co-organizer.

Reviewing for journals

- Journal of Electronic Commerce Research and Applications; and
- International Journal of Autonomous Agents and Multi-Agent Systems.

Community

- Member of the Graduate Council, GC-CUNY, 2004 – 2007.
- Member of the Curriculum Committee, CS-GC-CUNY, 2005 – 2006.
- Member of the Committee on Committee, GC-CUNY, 2004 – 2006.
- Member of the Steering Committee for Periodic Review Report to the Middle States Commission on Higher Education, GC-CUNY, 2005.
- Representative of the Computer Science Program in Doctoral Student Council, GC-CUNY, 2004 – 2005.

V. Research and Development

January 2010 – March 2010
Research Fellow

School of Computer Science
University of Birmingham

- Market-Based Control of Complex Computational Systems
 - To assist Professor Xin Yao, IEEE Fellow, on this UK-EPSCRC-funded project, which ends on March 31, 2010; and
 - To combine machine learning and evolutionary computation methods and apply to automated acquisition of auction mechanisms for control of complex computational systems.

July 2004 – December 2009
Research Assistant

Agent Laboratory, Department of Computer Science
Graduate Center, City University of New York

- Trading Agent Competition (TAC) Market Design Competition (CAT)
<http://www.marketbasedcontrol.com/cat/>
 - Successfully co-organized three CAT competitions respectively in conjunction with AAAI 2007, AAAI 2008, and IJCAI 2009, in collaboration with University of Liverpool and University of Southampton, UK;
 - Led the design and development team of JCAT, the multi-threading, socket-based server platform for the competition, which supports multiple, competing, auction markets and allows trading agents to move between them;
<http://jcat.sourceforge.net/>
 - Built a parameterized reference implementation of double auction mechanism for CAT competitions;
 - Designed the MetroCat specialist agent with a sliding-history-window-based shout accepting policy and a learn-or-lure-fast charging policy using linear programming optimization and multi-agent learning algorithms, which demonstrated significantly better performance than the 2007 CAT champion agent;
 - Presented the first classification of the strategies used by the 2007 CAT competition entrants and the first comparison of the effects of their strategies in a rigorous, systematic experiment, examined the interaction between the component strategies of a double auction mechanism, and characterized effective double auction mechanisms in both the CAT setting and the more general case; and
 - Explored the dynamics of the migration of traders between multiple competing markets and its effect on the economic properties of those individual markets in comparison with a big, global market.
- Empirical mechanism design
 - Introduced a *grey-box* approach to automated mechanism design based on evolutionary computation and reinforcement learning, which combines two existing methods respectively similar to white-box testing and black-box testing in software engineering, and successfully acquired market mechanisms in the setting of CAT games that can beat hand-crafted, winning, entries from prior CAT competitions;
 - Invented a matching algorithm that can maximize the transaction volume in call markets, proved its desirable economic properties, evaluated its performance when associated with different shout accepting policies, and demonstrated its potential to increase profit for businesses like <http://www.priceline.com/>;
 - Designed and implemented an estimated-equilibrium-based shout accepting policy that was capable of reducing price fluctuation in continuous double auctions with naive zero-intelligence trading agents while keeping allocative efficiency high; and
 - Evolved auction mechanisms using genetic algorithms and obtained fittest mechanisms that complied with results of other approaches.

- Trading strategies in double auctions
 - Extended the open-source Java Auction Simulator API (JASA) with a faster linear-programming-based Gjerstad-Dickhaut (GD) trading strategy that can reduce a simulation of months to days, and a correct implementation of Zero-Intelligence-Plus (ZIP) trading strategy; <http://jasa.sourceforge.net/>
 - Explored the parameter spaces of various trading strategies and obtained their optimal parameter configurations;
 - Refactored JASA, and made simulations easier and more flexible in terms of trader population composition, strategy parameter setup, auction rule configuration, and performance evaluation and comparison; and
 - Experimented with various homogeneous and heterogeneous trading strategy populations in continuous double auctions and call markets, and studied market efficiency in these different scenarios combined with different supply and demand schedules.
- Market-based control in cloud computing
 - Designed a double auction-based scheme for load balancing in cloud computing environments, where database query traffic is heavy and changes dynamically, in collaboration with Peking University and the Microsoft SQL Server China R&D Center.
- Advertiser bidding strategy in TAC Ad Auction Competition (TAC/AA)
 - Constructed an adaptive, parameterized, bidding strategy for competing in the game, which includes valuation policies to determine values of different slots, bid winning probability functions to calculate how likely a bid is to be accepted to place an ad at a certain ad slot, risk control policies to reduce the risk of abnormal estimates of slot value and bid price, search user modeling and opponent modeling policies to learn respectively the status of users who generate search queries and the status of other advertisers in the game, and finally an extended n-armed bandit problem solver that balances exploration and exploitation, and decides which policy on each of the above aspects should be selected on a game day so as to maximize the advertiser's utility; and
 - Led MetroClick, the joint team from CUNY and Microsoft, which participated in the first TAC/AA competition during IJCAI 2009, and entered the final round.
- Multi-agent learning
 - Surveyed and compared a variety of multi-agent learning methods.
- Electronic institutions
 - Conceived an evolutionary, game-theoretic approach to studying academic inbreeding in a multi-agent framework, in collaboration with School of Public Management, Renmin University of China.

June 2008 – December 2008
Research Intern

Search and Advertisement Sciences
Yahoo! Labs

- Machine learning-based ranking function for web search relevance
 - Investigated how to bring semantics to paid inclusion content and leverage structured data for search relevance based on RDFa; and
 - Constructed a locality feature and a heuristic concept categorization feature, which together led to 5% discounted cumulative gain (DCG) improvement over the base ranking function for datasets from Yahoo Shopping.

August 2002 – June 2004
Research Assistant

Center for Algorithms and Interactive Scientific Software (CAISS)
City College of New York, City University of New York

- Visualization of web search results
 - Built a Google Search API based prototype system in Java that can visualize search results in a map.
- Group-based authentication method
 - Invented a group theoretical authentication scheme with Professor Gilbert Baumslag, implemented it as a PAM module using Magnus, and deployed the prototype system in a local network including Linux-based PDAs.
- Magnus software package for symbolic computing in group theory
 - <http://magnus.sourceforge.net/>
 - Ported Magnus, in C++ and Tcl/tk, from RedHat Linux 7.3 to Fedora Core 1-3, FreeBSD 4.5 and Mac OS X; and
 - Separated computation logic in Magnus from other parts and made it accessible as a dynamic link library.
- Axiom general-purpose open-source computer algebra system
 - Helped to add Axiom, born in IBM and contributed to by hundreds, into Chinese RedFlag Linux distribution.

March 1999 – February 2001 Home Network Group, Digital Technology Division
Research Fellow, Group Lead Institute of Computing Technology, Chinese Academy of Sciences

- Data Broadcasting and Interactive (DBI) Server based on Apache and DVB
 - Led and coordinated the effort of building an Apache-based community proxy server that accepted requests via PSTN and sent responses via CATV to DVB-enabled PCs and DTVs, addressing the last-one-mile connectivity issue.
- Enhanced TV API Standard proposal
 - Collaborated on the effort of investigating existing standards and drafting the national standard proposal; and
 - Led the design and development of a reference implementation in Java, based on ATSC's DASE, DVB's MHP, and Sun's JavaTV, which provided a universal interface on PCs and DTVs and demonstrated capabilities for web surfing, realtime stock quotes, electronic TV program guide, and other applications.
- Intelligent Home Information Center (iHIC)
 - Led and coordinated this multi-million RMB, multidisciplinary, multi-institute project, which featured web-and-JMF-based remote home monitoring, WAP/SMS-based remote appliance control, interaction between DTV/PCs and other appliances, and integration of Internet, CATV, and PSTN; and
 - The system was funded by the National High-Tech Research and Development Program of China (863) and chosen to attend its 15th-Anniversary Achievement Exhibition.

September 1996 – February 1999 Department of Computer Science
Research Assistant Beijing University of Aeronautics and Astronautics

- Concurrent software development approach based on object-oriented Petri Nets
 - Defined an Object-Oriented Petri Net modeling language (OOPN) for concurrent, distributed programs;
 - Proposed a Petri-Net-embedded concurrent software development approach;
 - Built an OOPN Integrated Development Environment (OOPN-IDE) comprising 80K+ lines of Java source code, which featured simultaneous, distributed, graphical modeling, reachability-tree-based static and simulation-based dynamic deadlock detection, and automatic Java code generation; and

- The project was awarded the Advanced Science and Technology Prize by the funding China Ministry of Aeronautics in 1999, and the OOPN-IDE has been successfully used to develop a Petri-Net-based RTOS, and extended into a Globus-based grid application development toolkit and a multi-agent-based application builder in another project supported by the National Natural Science Foundation of China.

VI. Teaching

Spring 2009
Teaching Assistant

Department of Computer Science
Graduate Center, City University of New York

- *CSc 84200: E-Commerce and Computational Economics*
 - Lectured on the TAC Market Design Competition (CAT) and JCAT, the server platform for CAT; and
 - Guided students to design agents for CAT, and organized a class competition.

January 2005
Lecturer

Working Connections IT Faculty Development Institute
City University of New York

- *Linux Essentials and Administration*
 - This one-week course was part of a joint effort by the American Association of Community Colleges and Microsoft to increase community college faculty and staff expertise in IT.
 - This course in particular aimed to expose CUNY community college faculty to the usage and administration of Linux, and help them to pass on their expertise to their students.
 - My duties included determining topics to cover, preparing slides, giving lectures, and designing and guiding laboratory exercises.

Fall 2003 – Spring 2004
Adjunct Faculty

Department of Computer Science
City College of New York, City University of New York

- *CSc 33200: Operating Systems, Fall 2003*
<http://www.cs.gc.cuny.edu/~jniu/teaching/csc33200/csc33200.html>
 - This course is required for Computer Science undergraduates at CCNY.
 - This class covered a wide range of topics, including: process control and scheduling, multi-threading, process synchronization, memory and disk management, inter-process communication, and I/O handling.
 - My duties, identical to what a lecturer typically does, included preparing and presenting lectures, designing and guiding laboratory exercises, assigning and grading homeworks and exams.
 - In particular, I introduced into the curriculum a series of projects based on Nachos, a popular instructional software for operating systems courses, enabling students to obtain a down-to-earth feel about how multi-threading, memory management, and interrupt mechanism are designed and implemented in a real operating system.
- *CSc 31800: Internet Programming, Spring 2004*
<http://www.cs.gc.cuny.edu/~jniu/teaching/csc31800/csc31800.html>
 - This course aimed to provide advanced Computer Science or Engineering majors with an understanding of HTTP and web-based application development.
 - Topics included HTML, Cascading Style Sheet (CSS), HTTP client/server communication and application design, Common Gateway Interface (CGI), Java Servlet and Java Server Pages, and XML.
 - In particular, I designed projects including implementation of a HTTP server and a HTTP client, ripping off the mysterious cover of web techniques, which students would have little chance to get familiar with from the previously used syllabus.

Fall 1996 – Fall 1998
Teaching Assistant

Department of Computer Science
Beijing University of Aeronautics and Astronautics

- *Operating Systems Experiments with MINIX*

- This course followed an instructional operating system theory course, aiming to provide hands-on experience with operating system concepts to Computer Science majors.
- I designed the projects for students, including the implementation of process scheduling and memory management in MINIX, prepared and presented lectures, and supervised laboratory exercises.

June 1997 – August 1997

Instructor

China Unix User Group

- *Microsoft Office*
 - Taught Nokia employees to use Microsoft Office 97.
- *SCO UNIX*
 - Trained China Telecom employees to use and administer SCO UNIX systems.

VII. Publications

Journal papers

- J5.** Jinzhong Niu, Kai Cai, Simon Parsons, Peter McBurney, and Enrico Gerding. What the 2007 TAC Market Design Game tells us about effective auction mechanisms. *Journal of Autonomous Agents and Multiagent Systems*, 2009. To appear. Extended and modified version of **M3** and **M2**.
- J4.** Kai Cai, Jinzhong Niu, and Simon Parsons. Using evolutionary game-theory to analyse the performance of trading strategies in a continuous double auction market. *Journal of Electronic Commerce Research and Applications*, 2010. To appear. Extended and modified version of **C3**.
- J3.** Aihua Ren, Jinzhong Niu, Zian Sun, and Yuedong Du. OOPN integrated development environment. *China Computer Science*, 6, 1999. In Chinese.
- J2.** Aihua Ren and Jinzhong Niu. The principles of developing concurrent systems. *China Computer Science*, 6, 1999. In Chinese.
- J1.** Aihua Ren, Jinzhong Niu, and Yongming Zhang. An object-oriented Petri net based method for the concurrent program modeling. *Journal of Beijing University of Aeronautics and Astronautics (BUAA)*, 4, 1998. In Chinese.

Major refereed conference papers

- M4.** Jinzhong Niu, Kai Cai, and Simon Parsons. A grey-box approach to automated mechanism design. In *Proceedings of the Ninth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2010)*, Toronto, Canada, 2010. To appear.
- M3.** Jinzhong Niu, Kai Cai, Simon Parsons, Enrico Gerding, and Peter McBurney. Characterizing effective auction mechanisms: Insights from the 2007 TAC Mechanism Design Competition. In Padgham, Parkes, Müller, and Parsons, editors, *Proceedings of the Seventh International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2008)*, pages 1079–1086, Estoril, Portugal, May 2008. (Acceptance rate: 22.2%)
- M2.** Jinzhong Niu, Kai Cai, Peter McBurney, and Simon Parsons. An analysis of entries in the First TAC Market Design Competition. In *Proceedings of the IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT)*, Sydney, Australia, December 2008. (Acceptance rate: 18%)
- M1.** Jinzhong Niu, Kai Cai, Simon Parsons, and Elizabeth Sklar. Reducing price fluctuation in continuous double auctions through pricing policy and shout improvement rule. In *Proceedings of the Fifth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2006)*, pages 1143–1150, Hakodate, Japan, May 2006. (Acceptance rate: 23.1%)

Other refereed conference and workshop papers

- C7.** Tengjiao Wang, Bishan Yang, Allen Huang, Qi Zhang, Jun Gao, Dongqing Yang, Shiwei Tang, and Jinzhong Niu. Dynamic data migration policies for query-intensive distributed data environments. In Qing Li, Ling Feng, Jian Pei, Xiaoyang Sean Wang, Xiaofang Zhou, and Qiao-Ming Zhu, editors, *Advances in Data and Web Management, Joint International Conferences, APWeb/WAIM 2009, Suzhou, China, April 2-4, 2009, Proceedings*, volume 5446 of *Lecture Notes in Computer Science (LNCS)*, pages 63–75. Springer, 2009. **Best Paper Award at APWeb/WAIM 2009.**

- C6.** Jinzhong Niu, Kai Cai, Simon Parsons, Enrico Gerding, Peter McBurney, Thierry Moyaux, Steve Phelps, and David Shield. JCAT: A platform for the TAC Market Design Competition. In Padgham, Parkes, Müller, and Parsons, editors, *Proceedings of the Seventh International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2008)*, pages 1649–1650, Estoril, Portugal, May 2008. Demo Paper.
- C5.** Enrico Gerding, Peter McBurney, Jinzhong Niu, and Simon Parsons. CAT: A Market Design Competition. In *Proceedings of the Eleventh International Conference on the Simulation and Synthesis of Living Systems (Artificial Life XI)*, Winchester, UK, August 2008.
- C4.** Kai Cai, Jinzhong Niu, and Simon Parsons. On the economic effects of competition between double auction markets. In *Proceedings of the Tenth Workshop on Agent-Mediated Electronic Commerce (AMEC X)*, Estoril, Portugal, May 2008.
- C3.** Kai Cai, Jinzhong Niu, and Simon Parsons. Using evolutionary game-theory to analyse the performance of trading strategies in a continuous double auction market. In *Adaptive Agents and Multi-Agent Systems III. Adaptation and Multi-Agent Learning*, volume 4865 of *Lecture Notes in Artificial Intelligence (LNAI)*. Springer, 2008.
- C2.** Jinzhong Niu, Kai Cai, Simon Parsons, and Elizabeth Sklar. Some preliminary results on competition between markets for automated traders. In *Proceedings of AAAI-07 Workshop on Trading Agent Design and Analysis (TADA-07)*, Vancouver, Canada, July 2007.
- C1.** Jinzhong Niu, Jing Zou, and Aihua Ren. OOPN: An object-oriented Petri nets and its integrated development environment. In *Proceedings of 2003 IASTED International Conference on Software Engineering and Applications (SEA'2003)*, Marina del Ray, USA, November 2003. ACTA Press.
Best Student Paper of Year 2003–2004 at the Department of Computer Science, Graduate School and University Center, City University of New York.

Invited papers

- I1.** Steve Phelps, Kai Cai, Peter McBurney, Jinzhong Niu, Simon Parsons, and Elizabeth Sklar. Auctions, evolution and multi-agent learning. In *Adaptive Agents and Multi-Agent Systems III. Adaptation and Multi-Agent Learning*, volume 4865 of *Lecture Notes in Artificial Intelligence (LNAI)*. Springer, 2008.

Books

- B1.** Jinzhong Niu, Jinyu Niu, and Jintao Li. *WWW Technology — Design and Implementation Principles of Apache*. Water Electricity Publishing House, Beijing, China, April 2002. 398 pages. In Chinese.

Technical reports

- T11.** Jinzhong Niu and Simon Parsons. An investigation report on auction mechanism design. *Computing Research Repository (CoRR)*, abs/0904.1258, 2009.
- T10.** Jinzhong Niu, Albert Mmoloke, Peter McBurney, and Simon Parsons. CATP: A communication protocol for CAT games. Technical report, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, 2009. Version 2.0.
- T9.** Jinzhong Niu, Kai Cai, Peter McBurney, and Simon Parsons. JCAT: The software platform for CAT games. Technical report, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, 2009. Version 2.0.

- T8.** Kai Cai, Enrico Gerding, Peter McBurney, Jinzhong Niu, Simon Parsons, and Steve Phelps. Overview of CAT: A market design competition. Technical Report ULCS-09-005, Department of Computer Science, University of Liverpool, Liverpool, UK, 2009. Version 2.0.
- T7.** Jinzhong Niu, Kai Cai, Simon Parsons, and Peter McBurney. An analysis of entries in the First TAC Market Design Competition. Technical Report TR-2008016, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, 2008. Extended version of [M2](#).
- T6.** Jinzhong Niu. Auction experiments with JASA. Working paper, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, 2005.
- T5.** Jinzhong Niu. Review on multiagent learning. Working paper, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, 2004.
- T4.** Jinzhong Niu and Gilbert Baumslag. Social security group authentication. Technical report, Center for Algorithms and Interactive Scientific Software, City College of New York, City University of New York, January 2004.
- T3.** Jintao Li, Tiejun Huang, and Jinzhong Niu. Intelligent Home Information Center (iHIC). Technical report, Institute of Computing Technology, Chinese Academy of Sciences, March 2001. In Chinese.
- T2.** Jinzhong Niu, Tiejun Huang, and Jintao Li. The road map to Enhanced TV API. Technical report, Institute of Computing Technology, Chinese Academy of Sciences, May 2000. In Chinese.
- T1.** Jinzhong Niu, Tiejun Huang, and Jintao Li. Investigation report on Sun's JavaTV, ATSC's DASE, and DVB's MHP. Technical report, Institute of Computing Technology, Chinese Academy of Sciences, December 1999. In Chinese.

Papers under review or in preparation

- O5.** Kai Cai, Jinzhong Niu, and Simon Parsons. Network effects in double auction markets with automated traders. In *Proceedings of the 11th ACM Conference on Electronic Commerce (EC 2010)*, Cambridge, MA, USA, under review.
- O4.** Tengjiao Wang, Ziyu Lin, Bishan Yang, Jun Gao, Allen Huang, Dongqing Yang, Qi Zhang, Shiwei Tang, and Jinzhong Niu. MBA: A market-based approach to data allocation and migration in cloud databases. *Science in China Series F: Information Sciences*, under review.
- O3.** Jinzhong Niu and Simon Parsons. Maximizing matching in double-sided auctions. Working paper, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, in preparation.
- O2.** Jinzhong Niu. Network market-based load balancing. Working paper, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, in preparation.
- O1.** Simon Parsons, Marek Marcinkiewicz, Jinzhong Niu, and Steve Phelps. Everything you wanted to know about double auctions but were afraid to (bid or) ask. Working paper, Department of Computer Science, Graduate School and University Center, City University of New York, New York, NY, in preparation.

VIII. Invited Lectures

- *Experimental Auction Mechanism Design*. Renmin University of China, September 2008.
- *Empirical Game Theoretic Analysis on Auction Mechanisms*. Search and Advertisement Frontier Seminar, Microsoft, Redmond, WA, USA, May 7, 2008.
- *Auction Mechanism Design*. Shandong University, China, May 28, 2006.

IX. IT Skills

Theories and Technologies

- Object-Oriented Theory and Software Engineering (UML, Patterns)
- Computer Network (Internet-TCP/IP Stack), Servers (Apache, IBM WebSphere, BEA WebLogic, Plone, Drupal)
- XML and Web Service Technologies (AJAX, SOAP)
- Database Theory and Systems (Microsoft SQL Server, Oracle, MySQL)
- Operating Systems (Fedora/RedHat, FreeBSD, Solaris, Windows 9x/NT/ME/2000/XP)

Programming Languages

- Java (J2EE, JDBC, Servlet/JSP/JSTL, Ant, Eclipse), Prolog, COBOL, Perl since 1995
- C/C++ (GCC, MFC), Pascal (Turbo Pascal, Delphi), Assembly Language since 1993
- Python, Tcl/tk, PHP since 2002

Mathematical Software

- Matlab, R, SPSS

X. Languages

- Fluent in English and Chinese (native speaker)

XI. References

References are available upon request.