# CURRICULUM VITAE

Shengchao Qin

October 2009

## CONTACT DETAILS


- ✧ Physical Address:
  *At Work*: Department of Computer Science, Durham University, Science Labs,
  South Road, Durham, DH1 3LE
- ✧ Contact Telephone Numbers:
  0191 3341745 (Office) 07894638945 (Mobile)
- ✧ Email Address:
  *Work*: shengchao.qin@durham.ac.uk


## QUALIFICATIONS/PROFESSIONAL MEMBERSHIPS

- ✧ Postgraduate Certificate on Learning and Teaching in Higher Education (PGCert in LTHE), 2007. Durham University.
- ✧ Ph.D in Applied Mathematics, 2002. Peking University.
  Thesis topic: An algebraic approach to hardware/software partitioning.
  Supervisors: Prof. Zongyan Qiu, Prof. Naixiao Zhang, and Prof. Jifeng He (UNU/IIST).
- ✧ Bachelor of Information Science (Honour, First Class), 1997. Peking University.
- ✧ Fellow of the Higher Education Academy
- ✧ Professional Member of the ACM, the ACM SIGPLAN, and the IEEE CS

## WORK EXPERIENCE

- Lecturer in Computer Science, University of Durham (since 1.2005, permanent position)
  Main duties: research, teaching, administration, Ph.D/MSc supervision
- Research Fellow, CS Programme, Singapore-MIT Alliance (7.2002 - 12.2004)
  Main duties: research, Ph.D/MSc co-supervision, and light involvement of teaching
- Research Assistant, School of Mathematical Sciences, Peking University (9.2000 - 6.2002)
  Main duties: research
- Fellow, International Institute for Software Technology, United Nations University (09.1999 - 08.2000)
  Main duties: research
- Teaching Assistant, School of Mathematical Sciences, Peking University (03.1998 - 07.1999)
  Main duties: teaching (laboratory classes)

- Part-time Programmer and System Support, IT Dept., Hoechst (China) Ltd. (now HiServ) (07.1996 - 09.1997)
  Main duties: programming and system support

## TEACHING EXPERIENCE

I spent my first two years in Durham in taking the postgraduate certificate course on "Learning and Teaching in Higher Education" in School of Education and obtained the following results:Foundations of Learning and Teaching: 65%; The Scholarship of Learning and Teaching: 80%; Reflection on Learning and Teaching, the Portfolio: 75%.

During this course we were able to get in touch with various actionable theories on learning and teaching in higher education, upon which I have gradually built up my teaching strategy. In my own teaching practice, I am particularly interested in carrying out the constructive alignment theory. I organise all my teaching activities in such a way that they are aligned consistently to facilitate students to obtain appropriate intention and good motivation, and thus encourage them to adopt a deep approach of learning. By alignment, I mean all teaching activities including the learning objectives, the teaching methods and the assessment procedures are made compatible thus support each other. This, I believe, can make students' learning process more effective. In addition to the constructive alignment, I also feel that frequent and thorough reflection is essential in our teaching process. I collect students' feedback, not only through the end-of-term questionnaires, but also at lectures, tutorial classes and lab sessions (I voluntarily attend lab sessions for short periods to interact with students). I constantly evaluate my teaching activities via such feedback from students and make necessary self-improvement after thorough reflection.

I also believe that we should have *research-led* teaching in Higher Education. Research methods/elements should be present in our teaching as early as possible, not just in the final year modules. For example, I think it is a good idea to introduce "computational thinking" skills to first year undergraduate students. In my own teaching practice, I have tried to link the technical materials with real world applications in the second year module and to offer interested students an opportunity to reach the state-of-the-art research. I also have a plan to create a new module for final year Computer Science students in Durham in the area of formal verification, where I can possibly share my own research with the students, as an effort to carry out research-led teaching. This plan is to be implemented in year 2009/2010.

The courses/modules that I am going to teach or have taught are summarised in what follows.

- COMP3152: Advanced Software Engineering - Formal Verification (10 lectures). Department of Computer Science. Durham University.
  I am going to create and design this submodule from scratch over the summer and I will teach it to third year students in term 2 in year 2009/10.
- COMP51615: Semantic Web and Web Information Systems (10 lectures). Department of Computer Science. Durham University.
  I am going to teach half of this taught MSc module in year 2009/10.
- COMP2171: Programming and Reasoning - Specification and Verification (20 lectures + 4 tutorials/year). Department of Computer Science. Durham University.
  I created and designed this module in 2004/05 from scratch.
  I taught this module in the academic years 2004/05, 2005/06, 2006/07, 2007/08, and 2008/09, and I am still going to teach it in year 2009/10.
  I have been the module coordinator since 2008.

- COMP2161: Computer Systems II - Introduction to Concurrency (10 lectures/year). Department of Computer Science. Durham University.
  I taught this module in the academic years 2005/06, 2006/07, and 2007/08.
  I have been the module coordinator since 2006.
- COMP1082: Programming and Data Structures - Implementing Data Structures (10 lectures/year). Department of Computer Science. Durham University.
  I taught this module in the academic years 2005/06, 2006/07, and 2007/08.
- Final Year Projects and Taught MSc Projects Supervision (50 hours/year).
- CS1101: Programming Methodology (Java) (recitation lecturer, joint with Aaron Tan and Janice Lee). School of Computing, National University of Singapore. Autumn semester, 2004.
- CS4272 : Hardware/Software Co-Design (Lecturing, joint with Prof. P.S. Thiagarajan). School of Computing, National University of Singapore. Autumn semester, 2003.
- A series of lectures on Hoare and He's *Unifying Theories of Programming* at both Peking University and Tianjin University. Summer, 2001.
- Laboratory classes on the courses: "Fundamentals of Computing and C Programming Language", "Data Structures with C++", in School of Mathematical Sciences, Peking University. Feb. 2001 - July. 2001, and Sep. 1997 - July 1999.

## ADMINISTRATION

- I acted as the secretary of the following departmental committees: Taught Postgraduate Committee (year 2007/08), Undergraduate Coordinating Committee (2nd term 2008/09).
- I have served in the following committees: Natural Science Management committee (Science Faculty), Board of Studies, the Learning and Teaching committee, the Taught Postgraduate committee, the Undergraduate Coordinating Committee, the Staff/Student Consultative committee, the Admissions, Recruitment and Publicity committee, the Library, IT and Resources committee, and the board of Examiners.
- I was in charge of taught postgraduate admission in the year 2007/08.
- I have been the organiser for departmental seminar series since 2008/09.
- I have been the degree coordinator (for all degrees) and the Natural Science departmental advisor since 2008/09.

## RESEARCH EXPERIENCE

• *Research Interests.* My main research interests lie in formal methods, programming languages and software/system engineering, with emphasis on formal specification and modelling, formal methods integration, static analysis and automated software verification.
• *Research Grants/Awards*:

- ✧ EPSRC funded project EP/G042322/1: Inference Mechanisms for a Separation and Numerical Domain (*to start on 1st Oct 2009*). GBP488,899. (**PI**)
  To fund a postdoctoral RA and a Ph.D student for 3.5 years.
- ✧ EPSRC funded project EP/E021948/1: Resource Analysis and Verification for Dependable Embedded Software. 2007-2010. GBP252,627. (**PI**)
  To fund a Ph.D student for 3.5 years and an RA for 1 year.

- ✧ Durham University Doctoral Fellowship Grant. 10. 2007 - 9. 2010. $\sim$ GBP 73,020. (**PI**)
  To fund an overseas Ph.D student for 3 years with full overseas tuition fees, maintenance stipend at national rate, and research training grant. (Only three awards for the Science Faculty in 2007)
- ✧ NSFC funded project: Object Encapsulation and Protection in OO: Theories and Techniques. 2008-2010. RMB 500,000. (**CI**)
- ✧ NSFC funded project: Formal Models for Web Service Choreography Description Languages. 2008-2010. RMB 300,000. (**CI**)
- ✧ London Mathematical Society Small Grant. GBP 500. 2006.
- ✧ NSFC funded project: Real-Time Embedded Systems Design. 2001-2003. RMB 240,000.(**CI**)
- ✧ Peking University Grant for Creative Ph.D Thesis Work. 2000-2002. RMB 10,000. (**PI**)

• *Research Profile*:

I have been intensively involved in the research on formal methods, programming languages and software/system engineering, with the main focus on formal specification and modelling, methods integration, program analysis and verification.

I have strong research interests in formal methods, particularly in specification, verification, and integration of different methods and models. In my Ph.D thesis work, I proposed an algebraic approach to automating the hardware/software co-specification process and yet guaranteeing correctness. My research outcomes in formal specification and verification have been presented at various international conferences such as FM 03 [32,33], APLAS 04 [27] , ICFEM 02–05,08 [11,23,26,31,34], IFM 04 [30], UTP 06 [22], ICSE 06 [20], ICECCS 07 [17], TASE 07–08 [12,18] and published papers in international journals such as JCST [6], ISSE [1,5], ENTCS [4], IEEE Trans. on Software Engineering [2]. Among these, the work [33] reported at Formal Methods 2003 gives a sound compilation algorithm from Statecharts to Verilog HDL, to bridge the gap between high level graphical formalism and low level hardware. This algorithm forms part of the hardware/software co-specification framework [5]. Another work [32] that was also presented at Formal Methods 2003 presents a unified semantic model for the integrated formal specification language TCOZ, as an effort to support better modelling of complex systems. In collaboration with Jin Song Dong (NUS) and Wang Yi (Uppsala), we also worked out a novel specification mechanism in the form of timed patterns [2,20,23,26]. More recently, my interest was extended to Web semantics. As an initial result, we worked out a verification system for Web service orchestration languages [3,12].

Apart from the above research work on formal methods, one line of research that I have been involved in since 2002 is *memory analysis and verification* for embedded software. I was a main participant in a SMA project on region-based memory management. My NUS/SMA colleagues and I proposed an automatic region inference system for Java-like object-oriented languages (where I played a key role in the formalisation). The result was presented at ACM SIGPLAN PLDI 2004 [29]. I also participated in another project where my research was focused on *sized type*-based program analysis for imperative and object-oriented programs. A dependent type based approach was proposed to specify and verify general safety policies as reported in ICSE 2005 [25]. This lightweight technique was also applied to memory usage verification for object-oriented programs and reported at SAS 2005 [24]. An advanced analysis framework was also proposed to infer the memory usage bounds for low-level programs as reported in ISMM 2008 [13]. Very recently, a novel approach to memory usage verification was accepted by ATVA 2009 [7]. This line of research was funded by EPSRC in 2007 to support one Ph.D student (3.5 years) and one postdoc RA (one year) in my research group.

Since 2005, I have been intensively involved in another line of research on *program verification using separation logic*, in close collaboration with Wei-Ngan Chin's group in NUS. We have proposed a specification and verification framework in separation logic [16,19]. For better expressivity, the specification mechanism allows user-defined inductive separation predicates to be used in program specifications, where user-defined predicates can specify shape properties as well as numerical properties such as size, bag, set. Leveraging separation and numerical properties proves to be very useful in verifying memory safety as well as functional correctness of imperative programs manipulating heap-allocated shared mutable data structures [16]. This specification mechanism also allows multiple pre/post-conditions to be specified for each method/procedure for better behaviourial coverage [15]. We have also reported an initial proposal on verifying object-oriented programs using separation logic in ACM POPL 2008 [14]. This line of research has recently been funded by EPSRC as a grant award, aiming to develop *a scalable approach* to automated verification of memory safety as well as functional correctness for substantial system software. The grant will support one Ph.D student and one postdoc RA for 3.5 years. Some initial result on this line of research is under submission [43].

• *Members of My Research Group*:

- Florin Craciun (1-year postdoc funded by EPSRC; now in Romania)
- Aziem Chawdhary (3.5-year postdoc to start in Oct/Nov 2009; funded by EPSRC)
- Guanhua He (3rd year Ph.D student funded by EPSRC)
- Chenguang Luo (2nd year Ph.D student funded by Durham Doctoral Fellowship Grant)
- Wei Xiong (1st year Ph.D student supported in part by DAS grant)
- Ryuta Arisaka (Ph.D candidate to start in October 2009; funded by EPSRC)
- Granville Barnett (Ph.D candidate to start in October 2009; funded by DTA)

## PUBLICATIONS

- Refereed Journal Publications


[1] C. Luo, F. Craciun, S. Qin, G. He and W.N. Chin. Discovering Specifications for Unknown Procedures with Separation Logic. The workshop on Verified Software: Theories, Tools, and Experiments (VSTTE 2009). To appear in the Software Tools for Technology Transfer (STTT) journal.

[2] H. Zhu, S. Qin, J. He, and J. P. Bowen, PTSC: Probability, Time and Shared-Variable Concurrency. *International Journal on Innovations in Systems and Software Engineering*. Springer. ISSN: 1614-5046. To appear in 2009.

[3] J. S. Dong, P. Hao, S. Qin, J. Sun and W. Yi. Timed Automata Patterns. *IEEE Transactions on Software Engineering*. 34 (6): 844-859. 2008.

[4] C. Luo, S. Qin, and Z. Qiu, Verifying BPEL-like Programs with Hoare Logic. *Frontiers of Computer Science in China*. 2(4):344-356. 2008. ISSN: 1673-7350.

[5] C. Luo and S. Qin, Separation Logic for Multiple Inheritance. *Electronic Notes in Theoretical Computer Science*. 212: 27-40 (2008).

[6] S. Qin, W.-N. Chin, J. He, and Z. Qiu, From Statecharts to Verilog: a Formal Approach to Hardware/Software Co-Specification. *International Journal on Innovations in Systems and Software Engineering*. 2(1) :17-38. 2006. Springer. ISSN: 1614-5046.

[7] S. Qin, J. He, Z. Qiu, and N. Zhang, An Algebraic Hardware/Software Partitioning Algorithm. *Journal of Computer Science and Technology*. 17(3):284–294. May, 2002.

- Refereed Conference Publications

[8] G. He, S. Qin, C. Luo and W.N. Chin. Memory Usage Verification using HIP/SLEEK. The 7th International Symposium on Automated Technology for Verification and Analysis (ATVA'09). Macao on 14-16 Oct. 2009. Accepted to appear.

[9] F. Craciun, C. Luo, G. He, S. Qin and W.-N. Chin. Discovering Specifications for Unknown Procedures (Work in Progress). *The 2nd International Workshop on Invariant Generation (WING'09)*. 29 March 2009, York, United Kingdom.

[10] F. Craciun, W.-N. Chin, G. He, and S. Qin. An Interval-based Inference of Variant Parametric Types. *18th European Symposium on Programming (ESOP'09)*. 25-27 March 2009, York, United Kingdom.

[11] C. Luo, G. He, and S. Qin. A Heap Model for Java Bytecode to Support Separation Logic. *The 15th Asia-Pacific Software Engineering Conference(APSEC'08)*. Beijing, China, 3-5 December 2008. The IEEE CS Press.

[12] F. Craciun, S. Qin, and W.-N. Chin. A Formal Soundness Proof of Region-based Memory Management for Object-Oriented Paradigm. *Formal Methods and Software Engineering (ICFEM08)*. Kitakyushu-City, Japan. 27-31 October 2008. Lecture Notes in Computer Science, Volume 5256. Pages 126-146.

[13] C. Luo, S. Qin, and Z. Qiu, Verifying BPEL-like Programs with Hoare Logic. *The 2nd IEEE/IFIP International Symposium on Theoretical Aspects of Software Engineering(TASE'08)*. Nanjing, China, 17-19 June 2008. The IEEE CS Press.

[14] W.-N. Chin, H.H. Nguyen, C. Popeea, and S. Qin, Analysing Memory Resource Bounds for Low-Level Programs. *The International Symposium on Memory Management (ISMM'08)*. 7-8 June, Tucson, Arizona. The ACM Press.

[15] W.-N. Chin, C. David, H. H. Nguyen, and S. Qin. Enhancing Modular OO Verification with Separation Logic. *The 35th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL 2008)*. San Francisco, USA. January 10-12, 2008. The ACM Press.

[16] W.-N. Chin, C. David, H. H. Nguyen, and S. Qin. Multiple Pre/Post Specifications for Heap-Manipulating Methods. *10th IEEE High Assurance Systems Engineering Symposium (HASE'07)*. Dallas, Texas. November 14-16, 2007. IEEE CS Press.

[17] W.-N. Chin, C. David, H. H. Nguyen, and S. Qin. Automated Verification of Shape, Size and Bag Properties. *12th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS'07)*. Pages 307-320. Auckland, New Zealand. July 2007. IEEE CS Press. ISBN: 0-7695-2895-3.

[18] S. Qin and G. He, Linking Object-Z with Spec#. *12th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS'07)*. Pages 185-196. Auckland, New Zealand. July 2007. IEEE CS Press. ISBN: 0-7695-2895-3.

[19] H. H. Wang, S. Qin, J. Sun and J. S. Dong, Realizing Live Sequence Charts in SystemVerilog. *1st IEEE/IFIP International Symposium on Theoretical Aspects of Software Engineering (TASE'07)*. Pages 379-388. Shanghai, China. June 2007. IEEE CS Press. ISBN: 978-0-7695-2856-4.

[20] H. H. Nguyen, C. David, S. Qin, and W.-N. Chin, Automated Verification of Shape and Size Properties via Separation Logic. *8th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI'07)*. Nice, France. January 2007. Lecture Notes in Computer Science 4349, Springer-Verlag.

[21] J. S. Dong, P. Hao, X. Zhang, and S. Qin, HighSpec: a Tool for Building and Checking OZTA Models. *Proceeding of the 28th International Conference on Software Engineering (ICSE06)*. Pages 775–778. May, 2006. Shanghai, China. The ACM Press. ISBN:1-59593-375-1.

[22] H. Zhu, S. Qin, J. He, and J. P. Bowen, Integrating Probability with Time and Shared-Variable Concurrency. *The 30th Nasa/IEEE Software Engineering Workshop (SEW-30)*. April, 2006. Columbia, Maryland, USA.

[23] J. He, S. Qin, and A. Sherif, Constructing Property-Oriented Models for Verification. *First International Symposium on Unifying Theories of Programming*. Walworth Castle, County Durham, UK, 5-7 Feburary, 2006. Lecture Notes in Computer Science 4010, Pages 85–100, Springer-Verlag. ISBN:3-540-34750-X.

[24] J. S. Dong, P. Hao, S. Qin, and X. Zhang, The Semantics and Tool Support of OZTA. *Formal Methods and Software Engineering (ICFEM05)*. Manchester, UK. November 2005. Lecture Notes in Computer Science 3785, Springer-Verlag. ISBN: 3-540-29797-9.

[25] W.-N. Chin, H. H. Nguyen, S. Qin, and M. Rinard, Memory Usage Verification for OO Programs. *The 12th International Static Analysis Symposium (SAS05)*. September 2005. Lecture Notes in Computer Science 3672, Springer-Verlag. ISBN: 3-540-28584-9.

[26] W.-N. Chin, S.-C. Khoo, S. Qin, C. Popeea, and H. H. Nguyen, Verifying Safety Policies with Size Properties and Alias Controls. *27th International Conference on Software Engineering (ICSE05)*. 15-21 May, 2005. St. Louis, Missouri, USA.

[27] J. S. Dong, P. Hao, S. Qin, J. Sun and Y. Wang, Timed Patterns: TCOZ to Timed Automata. *Formal Methods and Software Engineering (ICFEM04)*. Seattle, WA, USA. 8-12 Nov., 2004. Lecture Notes in Computer Science 3308 (ISBN: 3-540-23841-7), Springer-Verlag.

[28] J. He, Z. Liu, X. Li, and S. Qin, A Relational Model for Object-Oriented Designs. *The Second ASIAN Symposium on Programming Languages and Systems (APLAS04)*. Taipei, Taiwan, 4-6 Nov. 2004. Lecture Notes in Computer Science, 3302 (ISBN: 3-540-23724-0), Springer-Verlag.

[29] T. V. Viet-Anh, S. Qin, and W.-N. Chin. Automatic Mapping from Statecharts to Verilog. *First International Colloquium on Theoretical Aspects of Computing (ICTAC04)*. Guiyang, China, 20-24 Sep. 2004. Lecture Notes in Computer Science, Springer-Verlag.

[30] W.-N. Chin, F. Craciun, S. Qin and M. Rinard, Region Inference for an Object-Oriented Language. *ACM SIGPLAN Programming Language Design and Implementation (PLDI04)*. Washington, DC, June 9-11, 2004.

[31] J. S. Dong, S. Qin and J. Sun, Generating MSCs from an Integrated Formal Specification Language. *Integrated Formal Methods (IFM04)*. Kent, UK, April, 2004. Lecture Notes in Computer Science, Springer-Verlag.

[32] Q. Long, Z. Qiu and S. Qin, The Equivalence of Statecharts. *Formal Methods and Software Engineering (ICFEM03)*. Singapore, Nov. 2003. Lecture Notes in Computer Science 2885, Springer-Verlag.

[33] S. Qin, J.S. Dong and W.-N. Chin, A Semantic Foundation for TCOZ in Unifying Theories

of Programming. *Formal Methods (FM03)*. Pisa, Italy, Sep. 2003. Lecture Notes in Computer Science 2805, Springer-Verlag.

[34] S. Qin and W.-N. Chin, Mapping Statecharts to VERILOG for Hardware / Software Co-Specification. *Formal Methods (FM03)*. Pisa, Italy, Sep. 2003. Lecture Notes in Computer Science 2805, Springer-Verlag.

[35] S. Qin, J. He, Z. Qiu, and N. Zhang, Hardware/Software Partitioning in Verilog. *Formal Methods and Software Engineering (ICFEM02)*. Shanghai, Oct., 2002, Lecture Notes in Computer Science 2495, pp 168–179, Springer-Verlag.

[36] S. Qin, Z. Qiu and J. He, Constructing Hardware/software Interface Using Protocol Converters. In *the proceedings of Second Asia-Pacific Conference on Quality Software (APAQS 2001, the predecessor of QSIC)*. IEEE Computer Society Press, pp 141–148, Hong Kong, 10-11 December, 2001.

[37] S. Qin and J. He, Partitioning Program into Hardware and Software. In *the proceedings of Eighth Asia-Pacific Software Engineering Conference (APSEC 2001)*. IEEE Computer Society Press, pp 309–316, Macau, 4-7 December, 2001.

[38] S. Qin and J. He, An Algebraic Approach to Hardware/software Partitioning. In *the proceedings of the 7th IEEE International Conference on Electronics, Circuits and Systems (ICECS 2000)*. IEEE Computer Society Press, pp 273–276, Jounieh, Lebanon, 17-20 December, 2000.

- Editorship

[39] W.-N. Chin and S. Qin. *Theoretical Aspects of Software Engineering*. The 3rd IEEE International Symposium. The IEEE CS Press. 29-31 July, 2009.

- Other Publications

[40] H. H. Nguyen, W. N. Chin, S. Qin and M. Rinard. Memory Usage Inference for Object-Oriented Programs, Singapore-MIT Alliance Symposium, January 2005.

[41] W. N. Chin, S. Qin and M. Rinard. Region Type Checking for Core-Java, Singapore-MIT Alliance Symposium, January 2004.

[42] S. Qin, J. He, and W. N. Chin. Towards An Automated Approach to Hardware/Software Decomposition, Singapore-MIT Alliance Symposium, January 2003.

- Papers Under Submission

[43] W.-N. Chin, C. David, H. H. Nguyen, and S. Qin. Automated Verification of Shape, Size and Bag Properties via User-Defined Predicates in Separation Logic. Under consideration by *Science of Computer Programming*. Revised version submitted.

[44] C. Luo, F. Craciun, S. Qin, G. He and W.N. Chin. Verifying Programs with Unknown Calls in Separation Logic. Under submission.

[45] C. Luo, S. Qin, W.N. Chin and G. He. Deriving Numerical Properties for Shape Analysis. Under submission.

## PROFESSIONAL ACTIVITIES

- Program Committee Chair (or Co-Chair) of
  - ICFEM 2011: 13th International Conference on Formal Engineering Methods, UK. Oct-Nov, 2011.
  - TASE 2009: 3rd IEEE/IFIP International Symposium on Theoretical Aspects of Software Engineering, Tianjin, China. 29-21 July, 2009.
- Program Committee Member of
  - ICIS 2009: 8th IEEE/ACIS International Conference on Computer and Information Science, Shanghai, China, 1-3 June, 2009.
  - UTP 2008: 2nd International Symposium on Unifying Theories of Programming, Trinity College, University of Dublin, Ireland, 8-10 Sep. 2008.
  - TASE 2008: 2nd IEEE/IFIP International Symposium on Theoretical Aspects of Software Engineering, Nanjing, China. 17-19 June, 2008.
  - ICECCS 2007: 12th IEEE International Conference on Engineering of Complex Computer Systems, Auckland, New Zealand. 10-14 July, 2007.
  - TASE 2007: 1st IEEE/IFIP International Symposium on Theoretical Aspects of Software Engineering, Shanghai, China. 6-8 June, 2007.
  - ICFEM 2006: 8th International Conference on Formal Engineering Methods, Macau, 30 Oct - 3 Nov. 2006.
  - SVV 2006: International Workshop on Software Verification and Validation. Seattle (USA), 21 August 2006.
- Publicity Chair of APLAS 2004, ICFEM 2003.
- Conference participation:
  - the MSR Reasoning Workshop (Cambridge, UK).
  - ETAPS'09 (York, UK).
  - ICFEM'08 (Japan), ICFEM'05 (UK), ICFEM'03(Singapore), ICFEM'02 (China).
  - POPL'08 (USA), POPL'07 (France).
  - ICECCS'07 (Auckland, New Zealand).
  - VMCAI'07 (Nice, France).
  - UTP'06 (County Durham, UK).
  - SAS'05 (London, UK).
  - ICSE'05 (St. Louis, USA).
  - APLAS'04 (Taipei)
  - ICTAC'04 (Guiyang, China).
  - PLDI'04 (Washington DC, USA).
  - FM'03 (Pisa, Italy)
  - APAQS'01 (now QSIC) (Hong Kong, China).
  - APSEC'01 (Macau, China).
  - ICECS'00 (Beirut, Lebanon)
- Academic visits

- PKU and ECNU. 19 Sep - 25 Oct 2008.
- NUS. 5 Aug - 5 Sep 2005.
- MIT.1 June- 8 June, 2004.
- UNU/IIST. 20 Nov - 20 Dec, 2003.

OTHER SELECTED AWARDS

- 2000 Chinese Academy Scholarship (Peking University).
- 1998 Guanghua Scholarship for graduates (Peking University).
- 1996 Sony Scholarship for undergraduates (Peking University).