

# Prof. Shengchao Qin

## CURRICULUM VITAE

### PERSONAL RECORD

#### ✧ Higher Education

- PGCert in Learning and Teaching in Higher Education, Durham University (2006)
- Ph.D, Peking University (9.1997 - 6. 2002)
- BSc, Peking University (9.1993 - 6. 1997)

#### ✧ Qualifications and Professional Memberships

- Ph.D (2002), BSc (1st Honour, 1997)
- PGCert in Learning and Teaching in Higher Education, Durham University (2006)
- Professional member of IEEE-CS, ACM, ACM-SIGPLAN, and BCS
- Fellow of Higher Education Academy

#### ✧ Work Experience

- Professor in Computer Science (since 1.6.2011), Teesside University
- Reader in Computer Science (1.6.2010 - 31.5.2011), Teesside University
- Lecturer in Computer Science (1.1. 2005 - 31.5.2010), Durham University
- Research Fellow (7.2002-12.2004), Singapore-MIT Alliance (based at National University of Singapore)
- Visiting Fellow (9.1999-8.2000), International Institute for Software Technology, United Nations University

### RESEARCH GRANTS AWARDS

As the sole investigator (PI), I have been awarded two EPSRC research grants in the last five years, worth £740,000 in total. I have also been the co-investigator of several NSFC research grants where the PI and the grant are based in Peking University.

- EPSRC Grant EP/G042322: Inference Mechanisms for a Separation and Numerical Domain. *10/2009–9/2013*. Total value: £488,899 (**PI**)
- EPSRC Grant EP/E021948: Resource Analysis and Verification for Dependable Embedded Software. *2.2007-7.2010*. Total value: £252,627 (**PI**)
- International Academic Award:£4,060. Teesside University, 2012.

- University Fund for a Full Ph.D Scholarship: £67,500. Teesside University. 2011.
- International Academic Award: £5,000. Teesside University, 2011.
- Doctoral Fellowship Grant: £72,000, 10.2007-09.2010. Durham University.
- EPSRC Doctoral Training Grant: £62,300, 10.2009-3.2013.
- NSFC Grant: Object Encapsulation and Protection in OO: Theories and Techniques. 2008-2010. CNY 500,000. **(Co-I)**
- NSFC Grant: Formal Models for Web Service Choreography Description Languages. 2008-2010. CNY 300,000. **(Co-I)**
- London Mathematical Society Small Grant. £500. 2006. **(PI)**
- NSFC Grant: Real-Time Embedded Systems Design. 2001-2003. CNY 240,000. **(Co-I)**
- Peking University Grant for Creative Ph.D Thesis Work. 2000-2002. CNY 10,000. **(PI)**

#### RESEARCH SUPERVISIONS AND EXAMINERSHIPS

I have been the first supervisor for five Ph.D students, one of them completed in 2010, one of them completed in 2011. I have also co-supervised another 4 Ph.D students and 1 MSc by research. All of them have completed successfully. I have also supervised (been supervising) three postdoctoral research associates and have had a number of examinerships.

- Research Students Supervision (7 completed; 100% completion rate)
  - T. V. Viet-Anh, MSc completed in 2005 (co-supervisor)
  - Huu Hai Nguyen, PhD completed in 2007 (co-supervisor)
  - Corneliu Popeea, PhD completed in 2008 (co-supervisor)
  - Florin Craciun, PhD completed in 2008 (co-supervisor)
  - Patricia Shaw, PhD completed in 2009 (2nd supervisor)
  - Chenguang Luo, Ph.D completed in 2010 (1st supervisor)
  - Guanhua He, Ph.D completed in 2011 (1st supervisor)
  - Wei Xiong, 3rd year Ph.D student (1st supervisor)
  - Granville Barnett, 3rd year Ph.D student (1st supervisor)
  - Ryuta Arisaka, 3rd year Ph.D student (1st supervisor)
- Postdoctoral Researcher Supervision
  - Dr. Guanhua He, since Mar 2011
  - Dr. Florin Craciun, Mar 2008 - Mar 2009
  - Dr. Aziem Chawdhary, Oct 2009 - July 2010
  - Dr. Joao Ferreira, Feb 2011 - Aug 2011

- Research Examinerships
  - PhD (Angel Robert Lynas, Teesside)
  - PhD (Nick Brown, Durham)
  - MSc by Research (Shukang Han, Durham)

## PUBLICATIONS

My citation count as on 9 June 2012 is 659, according to databases, such as ISI - Web of Science, Google Scholar, and Microsoft Academic Search.

### ✧ Edited Books

1. S. Qin and Z. Qiu . Formal Methods and Software Engineering. The 13th International Conference on Formal Engineering Methods. Lecture Notes in Computer Science, Volume 6991. Springer. 2011
2. S. Qin. Unifying Theories of Programming. The 3rd International Symposium. Lecture Notes in Computer Science, Volume 6445. Springer. 2010
3. W. N. Chin and S. Qin . Theoretical Aspects of Software Engineering, the Third IEEE International Symposium. IEEE Computer Society 2009.

### ✧ Refereed Journal Papers

4. 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. *Science of Computer Programming*. 77(2012):1006-1036. Elsevier.  
**Remark:** Corresponding author
5. H. Zhu, F. Yang, J. He, J. Bowen, J. W. Sanders, and S. Qin. Linking Operational Semantics and Algebraic Semantics for a Probabilistic Timed Shared-Variable Language. *Journal of Logic and Algebraic Programming*. 81(1):2-25. 2012. Elsevier.
6. C. Luo, F. Craciun, S. Qin , G. He, and W.-N. Chin. Verifying Pointer Safety for Programs with Unknown Calls. *Journal of Symbolic Computation*. 45(11):1163-1183. Elsevier.  
**Remark:** 1st and 2nd authors: supervised student/RA
7. 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*. 5(4):271-284, 2009. Springer. ISSN: 1614-5046.
8. 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.
9. 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.  
**Remark:** 1st author: supervised student
10. C. Luo and S. Qin , Separation Logic for Multiple Inheritance. *Electronic Notes in Theoretical Computer Science*. 212: 27-40 (2008).  
**Remark:** 1st author: supervised student

11. 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.
12. 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 Papers

13. G. Barnett and S. Qin. A Composable Mixed Mode Concurrency Control Semantics for Transactional Programs. The 14th International Conference on Formal Engineering Methods. Kyoto, Japan. 14-16 Nov 2012.
14. G. Barnett and S. Qin. Moverness for Locks and Transactions. The 6th International Symposium on Theoretical Aspects of Software Engineering (TASE'12). Beijing, China. 4-6 July 2012.
15. J. Ferreira, G. He, and S. Qin. Automated Verification of the FreeRTOS Scheduler in HIP/SLEEK. The 6th International Symposium on Theoretical Aspects of Software Engineering (TASE'12). Beijing, China. 4-6 July 2012.
16. W.-N. Chin, C. Gherghina, R. Voicu, Q. L. Le, F. Craciun and S. Qin. A Specialization Calculus for Pruning Disjunctive Predicates to Support Verification. *Computer-Aided Verification (CAV 2011)*.
17. S. Qin, A. Chawdhary, W. Xiong, M. Munro, Z. Qiu and H. Zhu. Towards an Axiomatic Verification System for JavaScript. the 5th IEEE International Symposium on Theoretical Aspect of Software Engineering. The IEEE Press.
18. S. Qin, C. Luo, W.N. Chin, and G. He. Automatically Refining Partial Specifications for Program Verification. *Formal Methods (FM 2011)*. Lecture Notes in Computer Science 6664. Pages 369–385. Springer.
19. C. Gherghina, C. David, S. Qin, and W.N. Chin. Structured Specifications for Better Verification of Heap-Manipulating Programs. *Formal Methods (FM 2011)*. Lecture Notes in Computer Science 6664. Pages 386–399. Springer.
20. S. Qin, G. He, C. Luo, and W.-N. Chin. Loop Invariant Synthesis in a Combined Domain. Formal Methods and Software Engineering (ICFEM2010). Shanghai, China. November 2010. Lecture Notes in Computer Science. Springer.
21. S. Qin, C. Luo, G. He, F. Craciun, and W.-N. Chin. Verifying Heap-Manipulating Programs with Unknown Procedure Calls. Formal Methods and Software Engineering (ICFEM2010). Shanghai, China. November 2010. Lecture Notes in Computer Science. Springer.
22. S. Wang, Z. Qiu, S. Qin, and W.-N. Chin. Stack Bound Inference for Abstract Java Byte-code. The 4th IEEE International Symposium on Theoretical Aspects of Software Engineering (TASE 2010), Taipei, August 24 - 27, 2010.
23. G. He, S. Qin, C. Luo and W.N. Chin. Memory Usage Verification using HIP/SLEEK. *The International Symposium on Automated Technology for Verification and Analysis (ATVA09)*. Lecture Notes in Computer Science. Volume 5799. Pages 166-181. Springer. 2009.

**Remark:** 1st author: supervised student

24. F. Craciun, W.-N. Chin, G. He, and S. Qin. An Interval-based Inference of Variant Parametric Types. *18th European Symposium on Programming (ESOP09)*. Lecture Notes in Computer Science. Volume 5502. Pages 112–127. 2009.  
**Remark:** 1st author: supervised RA
25. C. Luo, G. He, and S. Qin. A Heap Model for Java Bytecode to Support Separation Logic. *The 15th Asia-Pacific Software Engineering Conference(APSEC08)*. Pages 127–134. The IEEE CS Press. 2008.  
**Remark:** 1st & 2nd authors: supervised students
26. 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)*. Lecture Notes in Computer Science, Volume 5256. Pages 126–146. 2008.  
**Remark:** 1st author: supervised RA
27. 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 (TASE08)*. Pages 151–158. The IEEE CS Press. 2008.  
**Remark:** 1st author: supervised student
28. 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 (ISMM08)*. Pages 151–160. The ACM Press. 2008.
29. 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 (POPL08)*. Pages 87–99. The ACM Press. 2008.
30. 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 (HASE07)*. Pages 357–364. The IEEE CS Press. 2007.
31. 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 (ICECCS07)*. Pages 307–320. The IEEE CS Press. ISBN: 0-7695-2895-3. 2007.
32. S. Qin and G. He, Linking Object-Z with Spec#. *12th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS07)*. Pages 185–196. The IEEE CS Press. ISBN: 0-7695-2895-3. 2007.
33. 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 (TASE07)*. Pages 379–388. The IEEE CS Press. ISBN: 978-0-7695-2856-4. 2007.
34. 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 (VMCAI07)*. Lecture Notes in Computer Science. Volume 4349. Pages 251–266. Springer-Verlag. 2007.
35. 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. The ACM Press. ISBN:1-59593-375-1. 2006.

36. 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)*. Pages 179–189. The IEEE CS Press. 2006.
  37. J. He, S. Qin, and A. Sherif, Constructing Property-Oriented Models for Verification. *First International Symposium on Unifying Theories of Programming (UTP06)*. Lecture Notes in Computer Science. Volume 4010, Pages 85–100, Springer-Verlag. ISBN:3-540-34750-X. 2006.
  38. J. S. Dong, P. Hao, S. Qin, and X. Zhang, The Semantics and Tool Support of OZTA. *Formal Methods and Software Engineering (ICFEM05)*. Lecture Notes in Computer Science. Volume 3785, Pages 66–80. Springer-Verlag. ISBN: 3-540-29797-9. 2005.
  39. W.-N. Chin, H. H. Nguyen, S. Qin, and M. Rinard, Memory Usage Verification for OO Programs. *The 12th International Static Analysis Symposium (SAS05)*. Lecture Notes in Computer Science. Volume 3672, Pages 70–86. Springer. ISBN: 3-540-28584-9. 2005.
  40. 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)*. Pages 186–195. The ACM Press. 2005.
  41. J. S. Dong, P. Hao, S. Qin, J. Sun and Y. Wang, Timed Patterns: TCOZ to Timed Automata. *Formal Methods and Software Engineering (ICFEM04)*. Lecture Notes in Computer Science. Volume 3308, Pages 483–498. ISBN: 3-540-23841-7. Springer. 2004.
  42. 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)*. Lecture Notes in Computer Science. Volume 3302. Pages 415-436. ISBN: 3-540-23724-0. Springer. 2004.
  43. 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)*. 2004. Lecture Notes in Computer Science. Volume 3407. Pages 187–203. Springer. 2004.
- Remark:** 1st author: supervised student
44. 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)*. Pages 243–254. The ACM Press. 2004.
  45. J. S. Dong, S. Qin and J. Sun, Generating MSCs from an Integrated Formal Specification Language. *Integrated Formal Methods (IFM04)*. Lecture Notes in Computer Science. Volume 2999. Pages 168–186. ISBN 3-540-21377-5. Springer.2004.
  46. Q. Long, Z. Qiu and S. Qin, The Equivalence of Statecharts. *Formal Methods and Software Engineering (ICFEM03)*. Lecture Notes in Computer Science. Volume 2885. Pages 125–143. Springer. 2003.
  47. S. Qin, J.S. Dong and W.-N. Chin, A Semantic Foundation for TCOZ in Unifying Theories of Programming. *Formal Methods (FM03)*. Lecture Notes in Computer Science. Volume 2805. Pages 321–340. Springer. 2003.
  48. S. Qin and W.-N. Chin, Mapping Statecharts to VERILOG for Hardware / Software Co-Specification. *Formal Methods (FM03)*. Lecture Notes in Computer Science 2805. Pages 282–300. Springer. 2003.

49. S. Qin, J. He, Z. Qiu, and N. Zhang, Hardware/Software Partitioning in Verilog. *Formal Methods and Software Engineering (ICFEM02)*. Lecture Notes in Computer Science. Volume 2495. Pages 168–179, Springer. 2002.
50. S. Qin, Z. Qiu and J. He, Constructing Hardware/software Interface Using Protocol Converters. In *the 2nd Asia-Pacific Conference on Quality Software (APQS01, the predecessor of QSIC)*. The IEEE CS Press, Pages 141–148. 2001.
51. S. Qin and J. He, Partitioning Program into Hardware and Software. In *the 8th Asia-Pacific Software Engineering Conference (APSEC01)*. The IEEE CS Press, Pages 309–316. 2001.
52. 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 (ICECS00)*. The IEEE CS Press, Pages 273–276. 2000.

✧ Other Publications

53. H. H. Nguyen, W. N. Chin, S. Qin and M. Rinard. Memory Usage Inference for Object-Oriented Programs, Singapore-MIT Alliance Symposium, January 2005.
54. W. N. Chin, S. Qin and M. Rinard. Region Type Checking for Core-Java, Singapore-MIT Alliance Symposium, January 2004.
55. S. Qin, J. He, and W. N. Chin. Towards An Automated Approach to Hardware/Software Decomposition, Singapore-MIT Alliance Symposium, January 2003.

✧ Technical Reports/Monographs/Thesis

56. S. Qin, C. Luo, W.-N. Chin, and G. He. Automatically Refining Partial Specifications for Program Verification. Technical Report. School of Engineering and Computing Sciences, Teesside University. January 2011.
57. F. Craciun, W.-N. Chin, G. He, and S. Qin. An Interval-based Inference of Variant Parametric Types. Technical Report. Department of Computer Science, Durham University. December, 2008.
58. F. Craciun, S. Qin, and W.-N. Chin. A Formal Soundness Proof of Region-based Memory Management for Object-Oriented Paradigm. Technical Report. Department of Computer Science, Durham University. April, 2008.
59. C. Luo, S. Qin, and Z. Qiu. Verifying BPEL-like Programs with Hoare Logic. Technical Report. Department of Computer Science, Durham University. March, 2008.
60. W.-N. Chin, H. H. Nguyen, S. Qin, and Martin Rinard. Predictable Memory Usage for Object-Oriented Programs. Technical Report, November, 2004. School of Computing, National University of Singapore.
61. W.-N. Chin, S.-C. Khoo, S. Qin, C. Popeea, and H. H. Nguyen. Verifying Safety Policies with Size Properties and Alias Controls. Technical Report, September, 2004. School of Computing, National University of Singapore.
62. W.-N. Chin, S.-C. Khoo and S. Qin. A Sized Type System for Objects with Alias Controls. Technical Report, 2004. School of Computing, National University of Singapore.

63. W.-N. Chin, F. Craciun, S. Qin, and M. Rinard. Region Inference for an Object-Oriented Language. Technical Report, 2003. School of Computing, National University of Singapore.
64. J. S. Dong, P. Hao, S. Qin, J. Sun and W. Yi. TCOZ to Timed Automata. Technical Report TRC6/03. School of Computing, National University of Singapore.
65. S. Qin, J. He, Z. Qiu, and N. Zhang. Hardware/Software Partitioning in Verilog . Research Report 2002-33, School of Mathematical Sciences, Peking University.
66. S. Qin, Z. Qiu and J. He. Constructing Hardware/software Interface Using Protocol Converters. Research Report 2001-20, School of Mathematical Sciences, Peking University.
67. S. Qin, J. He, Z. Qiu, and N. Zhang. An Algebraic Hardware/Software Partitioning Algorithm. Research Report 2001-21, School of Mathematical Sciences, Peking University.
68. S. Qin and J. He. An Algebraic Approach to Hardware/software Partitioning. UNU/IIST Research Report 206, Macau, June, 2000.
69. S. Qin. An Algebraic Approach to Hardware/Software Partitioning in Hardware/Software Co-Design. Ph.D Thesis. School of Mathematical Sciences. Peking University. 2002.

## RESEARCH ESTEEM INDICATORS

I have held a number of invited research visits and have given a number of invited lectures. I have been involved in various international conference committees. I chair the program committee of the following international conferences: TASE2009, UTP 2010, ICFEM 2011. I have served in the program committee for more than 15 international conferences. I have a good number of excellent international research collaborators and I am currently trying to build up more national research collaborators.

- Invited Research Visits

- Research Visit, East China Normal University (August 2011)
- Senior Visiting Research Fellowship, National University of Singapore (July-Oct 2010)
- Research Visits, Peking University and East China Normal University (Sep-Oct, 2008)
- Senior Visiting Research Fellowship, National University of Singapore. (Aug-Sept 2005)
- Research Visit, MIT, (May 2005)
- Research Visit, UNU/IIST, (Nov-Dec, 2003)

- Program Committee Chair

- The 13th International Conference on Formal Engineering Methods, to be held in Radisson Blu Hotel Durham, 25-28 Oct, 2011.
- The 3rd International Symposium on Unifying Theories of Programming, Shanghai, China. 15-16 Nov 2011.
- The 3rd IEEE International Symposium on Theoretical Aspects of Software Engineering, in Tianjin, July 2009.

- Conference Publicity Chair



- APLAS 2004: Asian Programming Language and Systems Symposium, Taipei, Taiwan, 2004.
- ICFEM 2003: International Conference on Formal Engineering Methods, Singapore, 2003.
- Program Committee Member of the following international conferences/workshops:
  - ICFEM 2012: the 14th International Conference on Formal Engineering Methods. Kyoto, Japan, 12-16 November, 2012.
  - FM 2012: the 18th International Symposium on Formal Methods. Paris, France, 29-31 August, 2012.
  - UTP 2012: the 4th International Symposium on Unifying Theories of Programming, 27-28 August 2012.
  - TASE 2012: the 6th International Symposium on Theoretical Aspects of Software Engineering, Beijing, China, 4-6 July 2012.
  - LCTES 2012: the 13th ACM SIGPLAN/SIGBED Conference on Languages, Compilers, Tools and Theory for Embedded Systems Beijing, China, 12-13 June, 2012.
  - ICFEM 2011: 13th International Conference on Formal Engineering Methods, to be held in Durham, Oct-Nov, 2011.
  - TTSS 2011: 5th International Workshop on Harnessing Theories for Tool Support in Software, Sep 2011. Oslo, Norway.
  - TASE 2011: 5th IEEE International Symposium on Theoretical Aspects of Software Engineering, August 2011. Xi'an, China.
  - UML&FM 2011: 4th International Workshop on UML&Formal Methods, 20th June, 2011. Limerick, Ireland.
  - ICFEM 2010: 12th International Conference on Formal Engineering Methods, Nov 2010. Shanghai, China.
  - UTP 2010: the 3rd International Symposium on Unifying Theories of Programming, Nov 2010. Shanghai, China.
  - TASE 2010: 4th IEEE International Symposium on Theoretical Aspects of Software Engineering, Taipei, August, 2010.
  - MoCSeRS 2010: 1st International Workshop on Model Checking Secure and Reliable Systems, Singapore, 9 June 2010.
  - TASE 2009: 3rd IEEE International Symposium on Theoretical Aspects of Software Engineering, in Tianjin, July 2009.
  - 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.
- Steering Committee Member
  - the International Conference of Formal Engineering Methods (ICFEM)
  - the IEEE International Symposium on Theoretical Aspects of Software Engineering (TASE)
  - the International Symposium on Unifying Theories of Programming (UTP)
- Invited Journal Reviewer:
  - Frontiers of Computer Science in China
  - Journal of Computer Science and Technology
  - Journal of the ACM
  - Science of Computer Programming
  - Journal of Symbolic Computation
  - Formal Aspects of Computing
- Invited Lectures
  - Lecture given in Beijing University of Technology, August, 2011
  - Lectures given in East China Normal University, August, 2011
  - Lecture given in York University, UK, July, 2009
  - Lectures given in East China Normal University, October, 2008
  - Lecture given in Peking University, September, 2008
  - Lecture given in National University of Singapore, August, 2005
- External referee for two research grant proposals in Natural Science Foundation of China.
- External referee for a NSERC discovery grant proposal, Canada.
- Main Research Collaborators
  - National University of Singapore, Singapore (Wei-Ngan Chin)
  - Singapore University of Technology and Design (Jun Sun)
  - Peking University, China (Zongyan Qiu)
  - Institute of Software, Chinese Academy of Science (Naijun Zhan)
  - East China Normal University, China (Huibiao Zhu, Geguang Pu, Jifeng He)
  - Massachusetts Institute of Technology, USA (Martin Rinard)

- Academic Visitors Hosted

- Prof Zongyan Qiu (from Peking University), Feb-March, 2011
- Prof Huibiao Zhu (from East China Normal University), Feb-April, 2011
- Prof Wei-Ngan Chin (from National University of Singapore), May-June, 2008

## CONTRIBUTION TO COURSE DEVELOPMENT

- *Programme Development*

- Leading the development of the new (research-led) Advanced MSc in Computer Science in Teesside

- *Course/Module Development*

- MSc module on Software Verification,
- MSc module on Research Project,
- UG module: Advanced Software Engineering - Formal Verification,
- UG module: Programming and Reasoning - Specification and Verification,
- UG module: Computer Systems II - Introduction to Concurrency