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JERRY GAO, Ph.D.

Education

- 9/1992 – 8/1995 Department of Computer Science and Engineering
The University of Texas At Arlington
Ph.D. in Computer Science and Engineering
- 9/1986 – 12/1989 Department of Computer Science and Engineering
The University of Texas At Arlington
M.S. in Computer Science and Engineering
- 2/1978 - 2/1981 Studied and graduated from Computer Science Department
Nanjing University and HeHai University
B.S. in Computer Science

Academic Experience

- 2007 – Present San Jose State University, San Jose, U.S.A.
Full Professor, Dept. of Computer Engineering
- 2002 – May 2007. San Jose State University, San Jose, U.S.A.
Associate Professor, Dept. of Computer Engineering
- 9/1998 - 2002 San Jose State University, San Jose, U.S.A.
Assistant Professor, Dept. of Computer, Information, and System Engineering
- 6/1997 – 9/98 San Jose State University, San Jose, U.S.A.
Adjunct Professor, Dept. of Computer, Information, and System Engineering
- 9/94/ – 8/95 The University of Texas at Arlington
Instructor, Dept. of Computer Science and Engineering
- 2010 (Summer) Tsinghua University, China
Visiting Professor Computer Science Department National Key Lab.
- 2009 – Present Knowledge Systems Institute (KSI) USA
Adjunction Professor, and Business Development and Marketing Director
- 2008 (Summer) Peking University, China
Visiting Professor Software Engineering School

Summary of Achievement

- 5 successful industry R&D projects, lead to 5 prototype systems, and 3 industry products.
- Several industrial proposals brought out \$3,000,000 in 3 years in IT and network industry
- **Three technical books**, numerous edited proceedings, over **160 referred technical research papers** for IEEE, ACM journal papers and International conferences.

Summary of Experience

- 10-year working experience in software industry and 3-year of management experience.
- 15-year R&D experiences on software engineering, Internet-based IT, wireless applications.
- 6-year industrial constant experience for in network, IT, and software industry.
- 15-year academic teaching and research in Computer Software and Software Engineering, and many years professional training for HP, Cisco, and SJSU MBA program.
- Extensive knowledge, R&D experience, and working experience in modern software engineering processes, methodologies, test automation and tools, as well as evaluation and measurement.
- Comprehensive knowledge and R&D experience in wireless-based system development for mobile information services, and mobile commerce applications.
- Working experience on advanced network management systems for telecommunication systems.
- Industry consultant experience for Fujitsu Network Communication System, Inc., Aspect Communication System, Inc., HP, Huawei Technologies Co. Ltd., Intuit etc.

Current Research Interest

- Cloud Computing and Services, Software as a Service (SaaS)
- Testing as a Service (TaaS), Test Automation
- Mobile Computing and Service, Mobile Cloud Computing and Technologies
- Software Engineering and Service Engineering

Published Technical Books

Technical Books:

1. **“Object-Oriented Software Testing”**, published by *IEEE Computer Society Press*, 1998. (Co-edited with Dr. David Kung and Dr. Pie Hsia) This is the first book on this subject in the market 1998.
2. **“Testing and Quality Assurance for Component-Based Software”**, published by Artech House Inc., 2003. (Co-authored with Dr. Jacob Tsao and Dr. Ye Wu). This is the first book on this subject in the market 2003. It has been listed in the publisher’s best-seller list in 2004 and 2005.
3. **“Engineering Wireless-Based Software Systems”**, published by Artech House Publisher, August 2006. (Co-authored with Dr. Simon Shim, Dr. Hsing Mei, and Dr. Xiao Su). This is the first book on engineering wireless application systems on the market.

Two on-going contracted book projects on:

- (a) **“Mobile Cloud Computing”**
- (b) **“Testing as a Service on Clouds”**

Journal and Conference Proceeding Editing:

1. Jerry Gao, Hong Zhu, Guido Wiltz, Axel Kupper, Dijiang Huang, SATO Hiroyuki, Proceedings of IEEE MobileCloud2014, Oxford, UK, April 7-10, 2014. (EI-Indexed)
2. Jerry Gao, Lu Zhang, Saurabh Sinha, Proceedings of 9th International Workshop on Automation of Software Test (AST’14), 2014.India. (ACM-Indexed)

3. Jerry Gao, Haping Xu, Yan Bai, and George Roussos, International Journal of Software Engineering and Knowledge Engineering, Special Issue on Mobile Cloud Computing and Services, To be published in 2014.
4. Co-Editor for the Proceedings of IEEE International Symposium on Mobile Computing, Cloud Service and Engineering (MobileCloud2013), March 25-28, 2013, San Francisco, USA. IEEE Computer Society Press.
5. Co-Editor for the Proceedings of IEEE 7th International Symposium on Service-Oriented System Engineering (SOSE2013), March, 2013. IEEE Computer Society Press.
6. Co-Editor for the Proceedings of IEEE 6th International Symposium on Service-Oriented System Engineering (SOSE2011), Irvine, US, December, 2011, IEEE Computer Society Press.
7. Hong Zhu and Jerry Gao, Special Issue: “**Service-Oriented System Engineering – An Emerging Engineering Discipline**”, International Journal of Software and Informatics, Volume 7, Issue 2, 2013.
8. Shi-Kuo Chang, Jerry Gao and Paolo Nesi , Special Issue: **In Memory of Dan Cooke**; International Journal of Software Engineering and Knowledge Engineering (IJSEKE), December, 2011. (CSI/ISIA/CMCI/INSPEC/CA)
9. Co-Editor (with Henry Muccini and Xiaoying Bai) for a special issue on “Software test automation practice and standardization”, **International Journal of Software Engineering and Knowledge Engineering (IJSEKE)**, December, 2011. (CSI/ISIA/CMCI/INSPEC/CA)
10. Co-Editor for the proceedings of **The IEEE Sixth International Symposium on Service-Oriented System Engineering (IEEE SOSE2011)**, 2011.
11. Co-Editor for the processing of the 23rd International Conference on Software Engineering and Knowledge Engineering (SEKE2011), 2011, USA.
12. Co-Editor for the proceedings of **The 7th International Workshop on Mobile Commerce and Healthcare Services (WMCS2011)**, September 21-23, 2011, Hualien, Taiwan.
13. Co-Editor for the proceedings of **The 6th International Workshop on Mobile Commerce and Services (WMCS2010)**, May 12-13, 2010, Hualien, Taiwan.
14. Co-Editor for a special issue on **Software Test Automation, Advances in Software Engineering**, Vol. 2010, Article ID 163746, 2010.
doi:10.1155/2010/163746. <http://www.hindawi.com/journals/ase/contents.html>
15. Co-Editor for the proceedings of **The Twenty-Second International Conference on Software Engineering and Knowledge Engineering (SEKE 2010)**, San Francisco, USA.
16. Co-Editor of Proceedings of International Workshop on Software Test Automation, Practice, and Standardization, Conjunction in SEKE2010, July, 2010, USA.

17. Co-Editor of the Proceeding of IEEE sixth International Workshop on Mobile Commerce and Service (WMCS2010), Taiwan, 2010.
18. Co-Editor for the Proceedings of **The 5th International Workshop on Mobile Commerce and Services (WMCS2009)**, June 4-6, 2009, Qingdao, China.
19. Co-Editor for the Proceedings of the 21th International Conference on Software Engineering and Knowledge Engineering (SEKE'09), July 1-3, 2009, Boston, USA.
20. Co-Editor for the Proceedings for the Fifth International workshop on Mobile Commerce and Services (WMCS2009), Qingdao, China, June 4-6, 2009.
21. Co-Editor for the Proceedings the Second International Workshop on Engineering of Mobile-Based Applications and Network Systems (EMOBS2009), Seattle, USA, July, 2009.
22. Co-Editor for the proceedings of **The 4th International Workshop on Mobile Commerce and Services (WMCS2008)**, Kunming, China, May 25-28.
23. Co-Editor for the proceedings for the Twentieth of International Conference on Software Engineering and Knowledge Engineering (SEKE'08), San Francisco, USA, July, 2008.
24. Co-Editor for the proceedings of the Four International Workshop on Mobile Commerce and Services, at Kunming, China, in May 2008.
25. Co-Editor for the Special Issue on Testing and Quality Assurance for Component-Based Software for the **International Journal of Software Engineering and Knowledge Engineering**. This special issue was published in Volume 17, No. 3, 2007. (CSI/ISIA/CMCI/INSPEC/CA)
26. Co-Editor for the Special Issue on Mobile Commerce and Services in **Journal for Theoretical and Applied Electronic Commerce Research**. This special issue was published in Volume 2/Issues 2, August 2007. (INSPEC/ISJ/DOAJ/LD/DBLP/ACMPortal/SciELO/CSA/PROQUEST/EBSCO/SCOPUS/DIALNET)
27. Co-Editor for the proceedings for the First International Workshop on Engineering Wireless-Based Systems and Applications (EMOBS2007), Beijing, July, 2007.
28. Co-Editor for the proceedings for the First International Workshop on Software Testing for Emerging Technologies (TEST'07), Beijing, July, 2007.
29. Co-Editor for the proceedings for the Nineteenth International Conference on Software Engineering and Knowledge Engineering (SEKE'07), Boston, USA, July, 2007.
30. Jerry Gao, Sami Beydeda, "Featured topic: Testing and quality assurance for component-based systems", INTERNATIONAL JOURNAL OF SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERING, Volume 17, Issue 3, 2007.
31. Co-Editor for the proceedings for the First International Workshop on Engineering Wireless-Based Systems and Applications (EMOBS2007), Beijing, July, 2007.

32. Co-Editor for the Proceedings of First International Workshop on Evaluation and Evolution Of Component Composition (EECC 2006), San Francisco, USA, July 5-7, 2006.
32. Co-Chair for the Second International Workshop on Testing and Quality Assurance for Component-Based Software (TQACBS'2006) in conjunction with COMPSAC 2006, Chicago, USA, and September. 18-21, 2006.
33. Co-Editor for the Special Issue on **Wireless Commerce and Services in Journal of E-Commerce Research and Application**, published in 2005.
34. Co-Editor for the Proceedings of **Second IEEE International Workshop on Wireless Commerce and Services**, Published by IEEE Computer Society, in July 2005. (EI-Index)
35. Co-Editor for the Proceedings of the **Eighth International Conference on Young Computer Scientists (ICYCS 05)**, published in Sept. 2005.
36. Co-Editor for the Proceedings of the First International Workshop on Testing and Quality Assurance for Component-Based Software (TQACBS'2005) in conjunction with COMPSAC 2005, Edinburgh, Scotland, July 25-28.
37. Jerry Gao, Xiaoying Bai, W. T. Tsai, Tadahiro Uehara, "Mobile App Testing – A Tutorial", *IEE Computer – Special Issue on Software Validation*, February, 2014. (SCI-Indexed, EI)
38. **Chuanqi Tao**, Bixin Li, Jerry Gao. "CIA-Based Regression Test Case Update For Component-Based Software," Submitted to Journal of Computers. [EI Index] 2013.
39. Xiaoying Bai, Muyang Li, Bin Chen, and Jerry Gao, Wei-Tek Tsai, "Cloud Testing: Architecture, Techniques, and Tools", Submitted to ACM Computing Survey, 2012.
40. **Chuanqi Tao**, Bixin Li, and Jerry Gao, "A model-based framework to support complexity analysis for component-based software", submitted to Information-An International Interdisciplinary Journal [SCI Index]
41. **Chuanqi Tao**, Bixin Li, Jerry Gao, "构件软件中可配置架构的 测试建模和复杂性分析", 已投电子学报 [EI Index]
42. Chuanqi Tao, Bixin Li, Jerry Gao: "A Systematic State-Based Approach to Regression Testing of Component Software", Journal of Software, 8(3): 560-571 (2013). Academy Publisher , (EI-Index)
43. Chuan-Qi , Tao Bi-Xin Li, Jerry Gao, "Model-Based Change Impact Analysis for Component-Based Software", Journal of Software (in Chinese), 2013,
44. Siriphath Oumtrakul, Natharin Chanuntawaree, Jerry Gao, Hsing Mei, and Frank Zhang "AdTouch: A 2D-Barcode Based Mobile Advertising Service System", **Journal of Internet Technology**, Vol. 13 No. 2, P.337-350 (2012/3), 2012.
45. Jerry Gao, Xiaoying Bai, W. T. Tsai, "Cloud-Testing - Issues, Challenges, Needs and Practice", **Software Engineering: An International Journal (SEIJ)**, Vol. 1,

September, 2011.

46. David Kuo, Daniel Wong, Jerry Gao, and Lee Change, "A 2D Barcode Validation System for Mobile Commerce", **International Journal of Handheld Computing Research**, April-June 2011, Vol. 2 and No. 2. (EI-Indexed)
47. Phillip Laplante, Fevzi Belli, Jerry Gao, Greg Kapfhammer, Keith Miller, W Eric Wong, Dianxiang Xu, "Software Test Automation", *Advances in Software Engineering*, 2010.
48. Jerry Gao and Angela Ji, "Building An Intelligent Mobile Advertising System" (Journal Version), **The International Journal of Mobile Computing and Multimedia Communications (IJMCMC)**, January, 2010.
49. Norav Jobanputra, Vijayendra Kulkarni, Dinkar Rao, and Jerry Gao, "Emerging Security Technologies for Mobile User Accesses", Published by the electronic Journal on E-Commerce Tools and Applications (eJETA), January Issue, 2009.
50. Jerry Gao and Sami Beydeda, Special Issue on Component-Based Software Testing, **International Journal on Software Engineering and Knowledge Engineering**, 2007. (SCI)
51. Jerry Gao, Axel Küpper, **Special Issue on Mobile Commerce**, Editorial, **Journal for Theoretical and Applied Electronic Commerce Research**, August 2007, <http://www.jtaer.com/>
52. **Jerry Gao**, Axel Küpper, **Emerging Technologies for Mobile Commerce**, Editorial, *Journal for Theoretical and Applied Electronic Commerce Research*, August 2006, <http://www.jtaer.com/>.
53. **Jerry Zeyu Gao.**, Jacky Cai, Min Li, and Sunitha Magadi Venkateshi, "**Wireless Payment – Opportunities, Challenges, and Solutions**", Published by **High Technology Letters**, Vol. 12, ISSN 1006-6748, 2006. (EI-Index/SA/SCOPUS)
54. Jerry Gao and Ye Wu (Tutorial), "Testing Component-Based Software – Issues, Challenges, and Solutions", *Component-Based Systems*. Published by Springer's Lecture Note in Computer Science (LNCS) 2004. (Citation count: 11 in Google Scholar). (SCI/DBLP, ZBMath/CompuServe, core EI Compendex database, IO-Port, ACM Portal, Scopus, INSPEC)
55. Jerry Gao, Kamal Gupta, Shalini Gupta, and Simon Shim, "On Building Testable Software Components", *Proceeding of International Conference on COTS-Based Software Systems (ICCBSS)*, Orlando, Feb. 2002. Published by Springer's Lecture Note in Computer Science (LNCS). (SCI/DBLP, ZBMath/CompuServe, core EI Compendex database, IO-Port, ACM Portal, Scopus, INSPEC)
56. Harris Mohamed Yunos, **Jerry Gao**, Simon Shim, "Opportunities and Challenges in Wireless Advertising", **IEEE Computer**, May 2003. (SCI, SSCI/INSPEC/CLI/BMT/ASTI/CA/AHCI)

57. **Jerry Gao**, et. al, "Managing Problems for Global Software Production – Experience and Lessons", *Journal of Information Technology and Management*, issue 1, January 2002. (CSI/SSCI)
58. **Jerry Gao**, et. al, "Tracking Software Components", *Journal of Object-Oriented Programming*, August/September 2001. (CA/Data Processing Digest/INSPEC/SSCI)
59. S. Shim, V. Pendyala, M. Sundaram, and Jerry Gao, **Business to Business Electronic Commerce Frameworks**, Special issue on E-commerce in **IEEE Computer**, Vol. 33, No. 10, October, 2000. (SSCI/INSPEC/CLI/BMT/ASTI/CA/AHCI)
60. **Jerry Gao**, C. Chen, Y. Toyoshima, D. Leung, "**Engineering The Internet for Global Software Production**", *IEEE Computer*, Vol. 32, No. 4, May 1999. (SCI-Indexed)
61. **Jerry Gao**, C. Chen, Y. Toyoshima, D. Kung, and P. Hsia, "Identifying polymorphism change and impact in OO software maintenance," *Journal of Software Maintenance: Research and Practice*, Vol. 8, No. 6, Nov./Dec, 1996. (AS/ASP/CSA/CCI/SCI/COMPENDEX)
62. D. Kung, **Jerry Gao**, P. Hsia, F. Wen, Y. Toyoshima, and C. Chen, "On regression testing of object-oriented programs," *Journal of Systems and Software*, Vol. 32, No. 1, pp. 21-40, Jan. 1996. (SCI/CR/CA/CSA/INSPEC).
63. D. Kung, **Jerry Gao**, P. Hsia, Y. Toyoshima, and C. Chen, "Class firewall, regression testing, and software maintenance of OO systems," *Journal of OO Programming*, pp.51-65, May 1995. (CA/Data Processing Digest/INSPEC/SSCI)
64. D. Kung, **Jerry Gao**, P. Hsia, Y. Toyoshima, C. Chen, Y. S. Kim, and Y. Song, "Developing an OO software testing and maintenance environment," *Communications of the ACM*, Vol. 38, No. 10, pp. 75-87, October 1995. (SCI/ GeoRef/Compendex/ABI/INSPEC)
65. P. Hsia, J. Samuel, **Jerry Gao**, D. Kung, Y. Toyoshima, and C. Chen, "A formal approach for scenario analysis," *IEEE Software*, Vol. 11, No. 2, pp. 33-41, March 1994. (SCI/SSCI/INSPEC/CLI/BMT/ASTI/CA/AHCI)
66. Kung, Chen-Ho, Pei Hsia, Jerry Gao, and David C. Kung. "Specification and Verification." *Journal of Object-Oriented Programming*, (1990): 13-19.
67. Xiaoying Bai, Jerry Gao, and Wei-Tek Tsai, "Cloud Scalability Measurement and Testing", Collected in the book, titled as "Software Testing in the Cloud: Perspectives on an Emerging Discipline (by Scott Tilley and Tauhida Parveen), 2013.
68. Jerry Gao, Jacky Cai, "Wireless Payment and Systems", Collected in the book, titled as "**Handbook on Mobile and Ubiquitous Computing: Innovations and Perspectives**", which is published by the American Scientific Publishers in 2011.
69. Magdalene Ting and **Jerry Gao**, "Web-based Authoring Tool for e-Salesman System", Proceedings of the 2005 **IFIP International Conference on Embedded And Ubiquitous Computing (EUC-05)**, Nagasaki, Japan, 6-9 December 2005. Published by Springer's Lecture Note in Computer Science (LNCS).

69. **Jerry Gao**, Kamal Gupta, Shalini Gupta, and Simon Shim, "On Building Testable Software Components", **Proceeding of International Conference on COTS-Based Software Systems (ICCBSS)**, Orlando, Feb. 2002. Published by Springer's Lecture Note in Computer Science (LNCS).
70. D. Kung, **Jerry Gao**, P. Hsia, C. Chen, and Y. Toyoshima, "A test strategy for object-oriented systems," Collected in the book, titled as "**Object-Oriented Software Testing**", **IEEE Computer Society Press**, 1998. (EI-Index)
71. D. Kung, **Jerry Gao**, P. Hsia, Y. Toyoshima, C. Chen, Y. S. Kim, and Y. Song, "Developing an OO software testing and maintenance environment," Collected in the book, titled as "Object-Oriented Software Testing", IEEE Computer Society Press, 1998. (EI-Index)
72. D. Kung, **Jerry Gao**, P. Hsia, C. Chen, and Y. Toyoshima, "Change impact identification in object-oriented software maintenance," Collected in the book, titled as "**Software Change Impact Analysis**" (Edited by Robert S. Arnold and Shawn A. Bohner), IEEE Computer Society Press, 1996. (EI-Index)

**Research Papers in
Referred International
Conferences and
Workshops**

-
73. Chih-Han Chu, Menghsi Wan, Yufan Yang, **Jerry Gao**, and Lei Deng, “Building on-demand marketing SaaS for Crowdsourcing”, Proceedings of IEEE International Symposium on Creative Computing and Crowded Sourcing, Oxford, UK, April, 2014.
 74. Wei-Tek Tsai, Guanqiu Qi, Lian Yu, and **Jerry Gao**, “TaaS Design for Combinatorial Testing”, Proceedings of IEEE Eighth International Conference on Software Security and Reliability, San Francisco, USA, 6/30-7/2/2014, IEEE Computer Society Press.
 75. **Jerry Gao**, W.T. Tsai, Ray Paul, and Tadahior Uehara, “Mobile Testing as a Service (MTaaS) – Infrastructures, Challenges, Issues, and Needs”, HASE 2014: 15th IEEE International Symposium on High Assurance Systems Engineering, Miami, Florida, USA: January 9 - 11, 2014. (EI-Indexed)
 76. Lian Yu, Wei-Tek Tsai, **Jerry Gao** and Xin Wei, “Modeling and Analysis of Mobile Cloud Computing Based on Bigraph Theory,” Proceedings of The 2nd IEEE International Conference on Mobile Cloud Computing, Services, and Engineering (MobileCloud2014), Oxford, UK, 2014.(EI-Indexed)
 77. Mazedur Rahman, Samira Iqbal, **Jerry Gao**, and Shuyu Li, “Load Balancer as a Service in Cloud Computing,” Proceedings of the IEEE Eighth IEEE International Symposium on Service-Oriented System Engineering (SOSE2014), Irvine, California, USA, 2014. (EI-Indexed)
 78. **Jerry Gao**, Chih-Han Chu, Menghsi Wan, Yufan Yang and Lei Deng, “Building on-demand marketing SaaS for Crowdsourcing”, IEEE International Symposium on Creative Computing, 2014. (EI-Indexed)
 79. Zhengyi Le, Xiwen Zhang, **Jerry Gao**, “NemoAuth: A Mnemonic Multimodal Approach to Mobile User Authentication”, IEEE TENCON2013, October 22-25, 2013, Xi’an, China. (EI-Indexed)
 80. Chuanqi Tao, Bixin Li, and **Jerry Gao**, “Testing Configurable Architectures For Component-Based Software Using an Incremental Approach”, Proceedings of 25th International Conference on Software Engineering and Knowledge Engineering (SEKE2013), Boston, USA, June 27 - June 29, 2013. (EI-Indexed)
 81. Xiaoying Bai, Muiyang Li, Xiaofei Huang, Wei-Tek Tsai, and **Jerry Gao**, “Vee@Cloud: the Virtual Test Lab on the Cloud”, Automation of Software Testing (AST), May. 18 ~ 19, 2013. (In conjunction with 35th International Conference on Software Engineering (ICSE’13), San Francisco, CA, USA, May 2013.
 82. Ruay-Shiung Chang, **Jerry Gao**, Volker Gruhn, Jingsha He, George Roussos, Wei-Tek Tsai, “Mobile Cloud Computing Research – Issues, Challenges, and Needs”, the proceedings of International Symposium on Mobile Cloud,

Computing and Service Engineering, San Francisco Bay, California,
March 25 - March 28, Hotel Sofitel, IEEE Computer Society Press, 2013.

83. **Jerry Gao**, Xiaoying Bai, W. T. Tsai, and , Tadahiro Uehara, “SaaS Testing on Clouds – Issues, Challenges, and Needs”, the proceedings of International Workshop on Software Testing in the Cloud, San Francisco Bay, California, March 25 - March 28, 2013, Hotel Sofitel, IEEE Computer Society Press, 2013.
84. **Jerry Gao**, Xiaoying Bai, W. T. Tsai and Tadahiro Uehara, “Testing as a Service (TaaS) for SaaS Applications on Clouds”, the proceedings of 7th International Symposium on Service Oriented System Engineering, March 25 - March 28, 2013, Hotel Sofitel, San Francisco Bay, USA.
85. Mazedur Rahman, **Jerry Gao**, and Wei-Tek Tsai, “Energy Saving Solutions in Mobile Cloud”, the proceeding of IEEE International Conference on Cloud Engineering (IC2E), March 25-27, 2013, San Francisco, California, USA.
86. **Jerry Gao**, K. Manjula, R. Penmetsa, and E. Sumalatha, Xiaoying Bai, W. T. Tsai, and Tadahiro Uehara, “A Cloud-Based TaaS Infrastructure with Tools for SaaS Validation, Performance and Scalability Evaluation”, Proceedings of IEEECloudCom2012, Taiwan, 2012.
87. Bixin Li, Chuanqi Tao, Jerry Gao, “Test Modeling and Complexity Analysis for Configurable Architecture in Component-Based Software”, Proceedings of SAT2012. (EI-Index)
88. W. T. Tsai, Yu Huang, X. Bai, and Jerry Gao, "Scalable Architecture for SaaS", RTSOAA 2012. Proceedings of The Fifth IEEE International Workshop on Real-Time Service-Oriented Architecture and Applications, 2012.(EI-Indexed)
89. Jerry Gao, Pushkala Pattabhiraman, Xiaoying Bai and W. T. Tsai, “SaaS Performance and Scalability Evaluation in Clouds”, Proceedings of the Sixth IEEE International Symposium on Service-Oriented System Engineering (SOSE2011), Irvine, California, USA, 2011. (EI-Indexed)
90. Xiaoying Bai, Muiyang Li, Bin Chen, Jerry Gao and Wei-Tek Tsai, ”Cloud Testing Tools “, Proceedings of the Sixth IEEE International Symposium on Service-Oriented System Engineering (SOSE2011), Irvine, California, USA, 2011. (EI-Indexed)
90. Chuanqi Tao, Jerry Gao, and Bixin Li, “Regression Testing of Component-based Software - A Systematic Practice based on State Testing”, Proceedings of HASE2011, 2011. (EI-Indexed)
91. Jerry Gao, Jing Guan, Alex Ma, Xiaoying Bai, Chuanqi Tao, and David C. Kung, ”Testing A Configurable Component-Based Software – Configuration Test Modeling and Complexity Analysis “, Proceedings of 23th International Conference

on Software Engineering and Knowledge Engineering (SEKE2011), Miami, USA, July 7-9, 2011. (EI-Indexed)

92. Chuanqi Tao, Bixing Li, Jerry Gao, ” A Model-based Approach to Regression Testing of Component-based Software “, Proceedings of 23th International Conference on Software Engineering and Knowledge Engineering (SEKE2011), Miami, USA, July 7-9, 2011. (EI-Indexed)
93. Siriphat Oumtrakul, Natharin Chanuntawaree, Jerry Gao, Hsing Mei, and Frank Zhang,“ AdTouch: A 2D-Barcode Based Mobile Advertising Service System”, Proceedings of the Seventh International Workshop on Mobile Commerce and Healthcare Services (WMCS2011), LNCS, Springer, 2011.
94. David Kuo, Daniel Wong,,and Jerry Gao, Lee Chang,“A 2D Barcode Validation System for Mobile Commerce”, Proceedings of the 5th International Conference on Grid and Pervasive Computing (GPC2010), LNCS, Springer, Hualian, Taiwan, May, 2010.(EI-Index)
95. Jerry Gao, Maulik Shah, Mihir Shah, Devarshi Vyas, Pushkala Pattabhiraman, Kamini Dandapani and Emese Bari, “Systematic Risk Assessment and Cost Estimation for Software Problems”, The proceedings of The 21th International Conference on Software Engineering and Knowledge Engineering (SEKE09), San Francisco, July 1-3, 2009. .(EI-Indexed)
96. Jerry Gao Vijayendra Kulkarni, Himanshu Ranavat, Lee Chang, “A 2D Barcode-Based Mobile Payment System”, Proceedings of the 3rd International Conference on Multimedia and Ubiquitous Engineering (MUE2009), published by IEEE Computer Society Press. This paper is received the best paper award from MUE2009. (EI-Index)
97. Jerry Gao, Hema Veeraragavathatham, Shailashree Savanur, and Jinchun Xia, “A 2D Barcode-Based Mobile Advertising System”, The proceedings of The 21th International Conference on Software Engineering and Knowledge Engineering (SEKE09), Boston, USA, July 1-3, 2009. .(EI-Indexed)
98. Jerry Gao, Karen Kwok, and Todd Fitch, “Model-Based Test Complexity for Software Installation Testing”, The proceedings of The 20th International Conference on Software Engineering and Knowledge Engineering (SEKE08), San Francisco, July 1-3, 2008. (EI-Indexed)
99. Jerry Gao, et al, “Building Testable Software Components – A Systematic Approach and Its Experimental Results”, The proceedings of The 20th International Conference on Software Engineering and Knowledge Engineering (SEKE08), San Francisco, July 1-3, 2008. (EI-Indexed)

100. Jerry Gao and Angela Ji, "SmartMobile-AD: An Intelligent Mobile Advertising System" (Conference Version), Proceedings of The Fourth International Workshop on Mobile Commerce and Services WMCS08. Proceedings of GPC-2008 Workshops, Kunming, China, May, 2008. IEEE Computer Society Press.(EI-Index)
101. Jerry Zeyu Gao, Lekshmi Prakash, and Rajini Jagatesan, "Understanding 2D-BarCode Technology and Applications in M-Commerce – Design and Implementation of A 2D Barcode Processing Solution", The First IEEE International Workshop on Engineering Mobile-Based Systems and Applications (EMOBS2007), Beijing, July, 2007. Published in the in the proceedings of the 31st Annual International Computer Software and Applications Conference (COMPSAC2007). (EI-Index)
102. Jerry Gao, "Model-Based Software Testing", ASQ Silicon Valley, 2007.
103. Jerry Gao, Karen Kwok, and Todd Fitch, "Modeling and Analysis for Software Installation Testing – A Model-Driven Approach", The Proceeding of The Role of Software Architecture for Testing and Analysis (ROSATEA 2007), Boston, USA, July 9-11, 2007. (Published in Springer's lecture notes (LNCS)). (EI-Index)
104. Jerry Gao, Sujana Tirumalasetti, Chien-Pin Hsu, Yip Cheong, Anne Colendich and Todd Fitch, "Toward Modeling and Analysis for Software Installation Testing", The Proceeding of Nineteenth International Conference on Software Engineering and Knowledge Engineering (SEKE'07), Boston, USA, July 9-11, 2007. (EI-Indexed)
105. Jerry Gao, Yumei Wu, Lee Chang, and Sigurd Meldal, "Measuring Component-Based Systems Using a Systematic Approach and Environment", The Second IEEE Symposium on SOA-Based System Engineering (IEEESOSE'06 – EI-Index), Shanghai, China, October, 2006. (Citation count: 3 in Google Scholar)
106. Jerry Gao, Deepa Gopinathan and Quan Mai, "A Systematic Regression Testing Method and Tool For Software Components", Proceedings of 30th Annual 30th International Computer Software and Applications Conference (COMPSAC2006) (EI - Index), Chicago, September 18-21, 2006. Published by IEEE Computer Society Press.
107. W. T. Tsai, Jerry Gao, Xiao Wei, and Yinong Chen, "Testability of Software in Service-Oriented Architecture", Proceedings of the 30th Annual International Computer Conference on Software and Applications (COMPSAC2006 – EI-Index), Chicago, September 18-21, 2006. Published by IEEE Computer Society Press.
108. Jerry Gao, Gauri Durve, Sirisha Alam, and Simon Shim, "Wireless-Based Multimedia Messaging System", The Proceedings of The Third IEEE International Workshop

- on Mobile Commerce and Services (WMCS06), San Francisco, June 26-29, 2006. IEEE Computer Society Press, 2006. (EI-Index)
109. Jerry Gao, Jacky Cai, Kiran Patel, Simon Shim, "A Wireless Payment System", Proceedings of The 2nd International Conference on Embedded Software and Systems (ICCESS'05), Xian, China, December, 16-18, 2005. Published by IEEE Computer Society Press. (EI-Index)
 110. Jerry Gao, Li Ming, Sunita MV, and Jacky Cai, "Wireless Payment", Proceedings of the 8th International Conference for Young Computer Scientists (ICYCS'05), Beijing, Sept. 20-22, 2005.
 111. Jerry Gao, et al, "P2P-Paid: A Wireless Payment System on Mobile Phones", Proceedings of the Second IEEE International Workshop on Wireless Commerce and Services, Munich, Germany, July 18-19, 2005. IEEE Computer Society Press. (EI-Index)
 112. Magdalene Ting and Jerry Gao, "Web-based Authoring Tool for e-Salesman System", Proceedings of the 2005 IFIP International Conference on Embedded And Ubiquitous Computing (EUC-05), Nagasaki, Japan, 6-9 December 2005. Published by Springer's Lecture Note in Computer Science (LNCS). (SCI/DBLP, ZBIMath/CompuServe, core EI Compendex database, IO-Port, ACM Portal, Scopus, INSPEC)
 113. Jerry Gao and Ming-Chih Shih, "A Component Testability Test Model for Verification and Measurement", The First International Workshop on Testing and Quality Assurance for Component-Based Systems (TQACBS05 – EI-Index), Edinburgh, Scotland, July 25-28, 2005. IEEE Computer Society Press.
 114. Jerry Gao, Raquel Espinoza, and Jingsha He, "Testing Coverage Analysis for Software Component Validation", Proceedings of 29th Annual International Computer Software and Applications Conference (COMPSAC 2005) (EI Index), Edinburgh, Scotland, July 26-28, 2005. Published by IEEE Computer Society Press.
 115. Jerry Ze Gao and Y Wu, (Tutorial) Testing Component-Based Software-Issues, Challenges, and Solutions, Proceedings of ICCBSS 2004, Lecture Notes in Computer Science, 2004 – Springer. ICCBSS 2004, LNCS 2959.
 116. Jerry Gao, Chandra S. Ravi, and Espinoza Raquel, "Measuring Component Performance Using A Systematic Approach and Environment", TECOS 2004 - Net.ObjectDays 2004, Proceedings of The First International Workshop – Testing Component-based Systems, September 27-30, 2004, Erfurt, Germany.

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123. S Shim, Y Wang, IC Chane, JZ Gao, YJ Lee, “Template-based synchronized multimedia integration language authoring tool”, Electronic Imaging, 134-142. 2002
124. Jerry Gao, Kamal Gupta, Shalini Gupta, and Simon Shim, “On Building Testable Software Components”, Proceeding of International Conference on COTS-Based Software Systems (ICCBSS), Orlando, Feb. 2002. Published by Springer's Lecture Note in Computer Science (LNCS). (SCI/DBLP, ZBIMath/CompuServe, core EI/Compendex database, IO-Port, ACM Portal, Scopus, INSPEC)

125. Simon S.Y. Shim, Zhaoyuan Zeng, Jerry Gao, "Automatic Generation and Integration of RosettaNet Based On Generic Templates and Components", Proceedings of Fourth IEEE International Workshop on Advanced Issues of E-Commerce and Web-Based Information Systems (WECWIS'02), June 26 - 28, 2002. IEEE Computer Society Press. (EI-Index)
126. Jerry Gao, "Component testability and Component Testing Challenges", Proceedings of ICSE2000's 3rd International Workshop on Component-based Software Engineering: Reflects and Practice.
127. Jerry Gao, Eugene Zhu, and Simon Shim, "Tracking Software Components", Proceedings of ICSE2000's COTS Workshop: Continuing Collaborations for Successful COTS Development.
128. Jerry Gao, et al, "Monitoring Software Components and Component-Based Software", the proceedings of The twenty-fourth Annual International Computer Software & Applications Conference (COMPSAC2000), Taipei, Taiwan, October 2000. Published by IEEE Computer Society Press. (EI-Index)
129. Jerry Gao, Kamal Gupta, and Shalini Gupta, "Design for Testability of Software Components", Received the best paper award in The 13th International Software / Internet Quality Week (QW2000).
130. S. Shim, Y. Wang, Jerry Gao, I. Chane, and Y. Lee, "Template Based SMIL Authoring Tool", SPIE Electronic Imaging 2000, Internet Imaging, January 26-28 2000, Vol. 3964, pp.134-142.
131. Jerry Gao, et al., "A Web-Based Problem Management System: Development Experience and Lessons", The third International Workshop on Software Engineering Over the Internet in June 2000.
132. Simon Shim, Jerry Gao, "Multimedia Presentation Components in E-commerce", the Second International Workshop on Advance Issues of E-Commerce & Web-Based Information Systems (WECWIS 2000), June 8-9, 2000, pp. 158 - 165.(EI-Index)
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Infrastructure For Global Software Production”, Proceedings of Internal Conferences of Distributed Computing Systems Workshop on Electronic Commerce and Web-based Applications, 1999.

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142. D. Kung, Jerry Gao, P. Hsia, Y. Toyoshima, and C. Chen, "Tools for testing object-oriented programs," Proc. of 12th International Conference on Testing Computer Software, Washington D.C., June 13 -15, 1995. IEEE Computer Society Press, August, 1995. (EI-Index)
143. Jerry Gao, D. Kung, P. Hsia, C. Chen, Y. Toyoshima, "Object state testing for object-oriented programs," Proceedings of COMPSAC'95, pp. 232-238, IEEE Computer Society Press, 1995. (EI-Index)
144. D. Kung, N. Suchak, Jerry Gao, P. Hsia, C. Chen, and Y. Toyoshima,

“On object state testing,” Proceedings of COMPSAC’94 pp. 222-227, IEEE Computer Society Press, 1994. (EI-Index)

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146. D. Kung, Jerry Gao, P. Hsia, C. Chen, and Y. Toyoshima, “Change impact identification in object-oriented software maintenance,” Proceedings of IEEE International Conference on Software Maintenance, pp. 202-211, IEEE Computer Society Press, 1994. (EI-Index)
147. D. Kung, Jerry Gao, P. Hsia, C. Chen, and Y. Toyoshima, “A testing and maintenance environment for object-oriented programs,” Proceedings of CASCON’94, Canada 1994.
148. P. Hsia, Jerry Gao, J. Samuel, D. Kung, Y. Toyoshima, and C. Chen, “Behavior-based acceptance testing of software systems: a formal scenario approach,” Proceedings of COMPSAC’94, IEEE Computer Society Press, 1994. (EI-Index)
149. P. Hsia, Jerry Gao, J. Samuel, D. Kung, Y. Toyoshima, and C. Chen, “Behavior-based integration testing of software systems: a formal scenario approach,” Proceedings of 5th International Conference on Systems Integration, 1994.
150. D. Kung, Jerry Gao, and P. Hsia, “An object-oriented testing and maintenance environment,” CASCON’94, Toronto, Oct. 31 - Nov. 3, 1994.
151. P. Hsia, J. Samuel, Jerry Gao, D. Kung, Y. Toyoshima, and C. Chen, “A formal approach for scenario analysis,” Proceedings of ICRE1994. It has been selected as a one best paper and its extended version has been published by IEEE Software, Vol. 11, No. 2, pp. 33-41, March 1994. (EI-Index)
152. D. Kung, Jerry Gao, P. Hsia, J. Lin and Y. Toyoshima, “Design recovery of software testing of object-oriented programs,” Proceedings of the Working Conference on Reverse Engineering, pp. 202-211, Baltimore Maryland, May 21-23, IEEE Computer Society Press, 1993. (EI-Index)

**Industry Working
and Consultant
Experience**

10/2011 – Present Fujitsu Research Lab. in Japan

Research and Prototyping on Cloud Testing for SaaS Applications.

1/2008 – 3/2009 Huawei Technologies Co. Ltd. China.

Contracted Expert Consultant for Testing & QA Service and Training in the following areas:

- Component Testing & Quality Control Methods and Processes for Platform-Based Software Components and Middleware.
- Evaluation and Analysis for Software Engineering Process and Engineering Practice
- Identification and Analysis of Testing Problems
- Propose Solutions in Component Development Process and Quality Control
- Technical Training for Component Testing Team(s) and Software System Production

Teams on the following subjects:

- Middleware architecture and testability
- Model-based software testing and practice
- Agile-based software testing and practice Test Methodologies for Domain-Specific Software Components Model-based software testing analysis, methods, and practice Agile-based software testing, methods, and practice.

1/2008 – 2/2009 eBay, USA

Technical Consultant and Supervision for Student Collaboration Project – Software Test and Risk Analysis for Problem Resolution in QA Process.

- Automating Tools for Software Test and Risk Analysis for Problem Resolution.

1/2007 – 12/2007 eBay, USA

Technical Consultant and Supervision for Student Collaboration Project - Web-Based Software Test Automation project

- Test Automation for online system test automation – focusing on web-based system GUI test model, open-source-based test script generation, and test coverage analysis.

1/2006 – 6/2006 Intuit Inc., USA

Expert Consultant in Software Test Automation for Enterprise Solutions

Major responsibility in **Project #1- test automation for enterprise software:**

- Identify major issues and propose the solutions in test automation for enterprise-oriented common-ware (platform, common architectures, and mid-ware)
- Identify and define test models and test coverage criteria for enterprise-oriented software
- Identify and define a change and regression test process, methodology, and tool for enterprise-oriented common-ware (platform, common architectures, and mid-ware)
- Lead and supervise a project team to develop the test automation solution and tool

Major responsibility in **Project #2 – test automation for software installation**

- Identify major issues and propose the solutions in automatic testing for software installation and patches
- Identify and define test models and test coverage criteria for software installation
- Identify and define a change and regression test process, methodology, and tool for auto-testing for software installation.
- Lead and supervise a project team to develop the required test automation solution and tool.

6/2005 – 9/2006 Huawei Technologies Co. Ltd. China.

- Expert Consultant in Software Component Testability
- Expert Consultant in Component Controllability Project

- Expert Consultant on Design for Testability and Maintenance for Component-Based Systems

1/2002 – 12/2002

Huawei Technologies Co. Ltd. China.

- Principle Consultant on Systematic Solutions for Enhancement of Testability and Performance Measurement of Real-Time Communication Systems.

Major Responsibility:

- Define enterprise-oriented solution requirements for system testability and performance measurement.
- Design cross-product systematic solutions for tracking and monitor real-time system behavior and performance.
- Define product-oriented system environments and tools to support the solutions.

6/2000 – 10/2001

ASPECT Communications, Inc. San Jose

Principle Consultant on E-Business Performance Testing, Metrics, and Tools

Major Responsibilities:

- Define enterprise-oriented performance test strategy and metrics
- Develop product-oriented performance testing methodology for e-business products on the Internet.
- Define performance testing environment and tools
- Write requirements and functional specifications for performance tools
- Write performance and reliability metrics

6/1999 – 5/2000

Fujitsu Network Systems, Inc. San Jose

Principle Architecture Consultant on Web-Based Software Engineering Environment

Major Responsibilities:

- Define system infrastructure and architecture for integrated software engineering environment over the Internet.
- Define requirements and functions specifications for software tools
- Write overall system architecture and infrastructure

10/1998 – 5/1999

Fujitsu Network Systems, Inc. San Jose

Principle Architecture Consultant on Re-Driven Software Engineering

Major Responsibilities:

- Define reuse-driven software development process.
- Define reuse-driven software development standards
- Conduct and define network management reuse framework architecture and supporting environment
- Write software engineering requirements for supporting reuse-driven projects.

2/1997 – 9/1998 Fujitsu Network Communications, Inc., San Jose

Technical Manager, Project Lead and System Architect in Software Engineering Department

Major responsibilities:

- Write project proposals and system requirements for new products.
- Manage a team about 10 engineers for product line projects, and play as a project leader.

- Conduct requirement elicitation, and write function and product specifications.
- Conduct technology selection and evaluation for our products.
- Conduct product high-level and detailed design.
- Lead component test, integration test, system test, and performance test.

Project: “A web-based global problem management system on Internet”

- Technology used: JAVA J.D.K (1.02 and 1.1), HTML, CGI, CORBA (Orbixweb, Orbix), C++, secured web server, and ORDB (ILLUSTRA).
- First three engineering releases are Java/CGI based web systems, and one product release.
- Lead the high-level design, detailed design and implementation.
- Prepared and written the documents:
 - “Product Specifications For Fujitsu Product Development Environment”
 - “Requirements Specification For A Global Web-Based Problem Management System”
 - “Functional Design Specifications for PIMS”

Project: “A web-based global test management system on Internet”

- Technology used: JAVA J.D.K (1.02 and 1.1), HTML, JavaScript, CGI, CORBA (Orbixweb, Orbix), C++, secured web server, and ORDB (ILLUSTRA).
- First prototype release is a pure CGI-based web system using HTML, Java, JavaScript, and CGI as well as C++ and ORDB. Working on a new product release.
- The current product release uses CORBA and Java technology.
- Prepared and written the documents:
 - “Requirements Specifications For A Web-Based Test Management System ”
 - “Functional Design Specification For A Global Web-Based Test Management System ”
- Reuse Project: “Software Tracking and Analysis Toolkit for Software Reuse”
 - Wrote: a Project Proposal, and ”Requirements Specifications for Software Tracking and Analysis Toolkit of Software Reuse”

- 8/1995 – 2/1997 **Fujitsu Network Communications, Inc., San Jose, CA**

Sr. Member of Technical Staff, Technical Leader of Software Engineering R&D group

Major responsibility:

- Research on domain-specific test automation, software engineering methodology, and applications of new technology.
- Technical lead for the development of several R&D prototype systems using Unix, C/C++, Java, WWW (HTML, JavaScript, and CGI), and OO Database (ILLUSTRA).

Prepared and written the following documents:

- “Feature Specifications for TL1 Message Testing Tool”
- “Basic Design Specifications for TL1 Message Testing Tool (Prototype)”
- “Feature Specifications for Web-based Integrated Testing Environment”
- “Basic Design Specification For Web-based Test Management System (Prototype)”

6/1992 – 8/1995 Software Center For Telecommunications

- The University of Texas At Arlington, Arlington Texas

Manager of Software Lab., Research Associate, and Instructor

- Key person and investigator in Founded Software Engineering Research Project on

- Object-Oriented Program Testing and Maintenance Methodology.
- Manage and supervise 15 master students to develop the first testing and maintenance environment for OO software using C/C++, Motif and X lib.
- Wrote research papers, high-level design documents and conduct review as well as implementations.
- 2/1991 – 5/1992 IEX Corp., Plano, Texas
Member of Technical Staff, Software Developer
- Designed and developed several real-time telecommunication application systems using Unix, C/C++, Sockets, X25, and TCP/IP.
- An automated-call distribution system between AT&T switch and IBM mainframe. The including features are call forward, call routing, conference call, etc.
- A force management system for a call center, including call tracking, staff, scheduling, reporting, statistical analysis, and optimization.
- 2/1982 – 8/1986 The Nanjing Research Institute of WR, China
Assistant Engineer and Software Developer, in the Computer Center
- Designed and developed a real-time data acquisition, communication & processing system for water resource management applications (flood forecasting, water evaluation, water monitoring)

Invited Talks

2013 – Keynote Speech for AST 2013

Title: Testing as a Service (TaaS) on Clouds

Eighth International Workshop on Automation of Software Test (AST'13), May. 18 ~ 19, 2013. in Conjunction with the 35th International Conference on Software Engineering (ICSE'13), San Francisco, CA, USA, May 2013

2013 – Tutorial: Testing as a Service (Jerry Gao and Xiaoying Bai)

IEEE SOSE2013, Hotel Sofitel, Redwood City, USA. March 25-28, 2013

2013 – Panel Presentation: Testing as a Service in Clouds

STITC/IEEE SOSE2013, Hotel Sofitel, Redwood City, USA. March 25-28, 2013

2011 – Panel Presentation in IEEE SOSE2011

Topic: Testing as a Service (TaaS)- Challenges, Opportunities, and Needs

2010 – Panel Presentation in IEEE SOSE2010

Topic: Cloud Testing – Opportunities, Issues, Challenges, and Needs

Invited Talk: “Model-based Software Testing and Automation”

2007 - ROSATEA 2007 - The Role of Software Architecture for Testing and Analysis –

The Federated Events (National Workshop) on Component-Based Software Engineering and Software Architecture.

- **Keynote address topic:** “Component-Based Software Testing and Analysis – Architecture Perspectives”

2007 – The International Seminar on High Confidence of Software Engineering

Summer – Invited Talk: (in Beijing, China)

- **Topic** “Testing Component-Based Software – Architecture Perspectives”

2005 – The 8th Young Computer Scientists (ICYCS’05) in Beijing, China, Sept. 20-22. 2005.

- Keynote address topic: “Engineering wireless-based application systems Markets, Issues, Challenges and Needs”

2004 – The 3rd International Conference on COTS-Based Software Systems, Redondo Beach, California, U.S. A, Feb. 4-8, 2004.

- **Tutorial Topic:**

“Testing of Component-Based Software – Challenges and State-Of-the-Art Solutions”

2003 – IEEE 18th International Conference on Automated Software Engineering, Oct. 2003, Montreal, Canada.

- **Tutorial Topic:**

“Testing of Component-Based Software – Issues, Challenges, and Solutions”

Advanced Technical Tutorials (Short Course) for Industry:

2009, June – Huawei Technologies LTD, at Shenzhen, China

- Topic: “Concurrent Software Testing – Models, Methods, and Solutions”
- Topic: “Software Usability Testing”

2008, May – Huawei Technologies LTD, at Shenzhen, China

- Topic: Model-Based Software Testing and Practice I and II
- Topic: Agile-Based Software Testing and Practice

2006, April – Huawei Technologies LTD, at Shenzhen, China

- Topic: Design for Software Component Testability

2005, Summer– Huawei Technologies LTD, at Shenzhen, China

- Topic: Software Reuse – State-of-the-art

2005, March – Huawei Technologies Ltd. At Shenzhen in China

- Topic: “Component-Based Software Development and Management”

2005, March – UT Start COM. At Shenzhen in China

- Topic: “Component-Based Software Testing”

Invited Short Courses and Talks:

2012 (Invited Talks) – Northwest University, Xi’An, China

- **Topic #1: Mobile Cloud Computing and Services – Opportunities, Challenges, Issues, and Needs**
- **Topic #2: Testing as a Service – Opportunities, Challenges, Issues, and Needs**

2012 (Invited Talks) – Tsinghua University, Beijing, China

Topic #2: Testing as a Service – Opportunities, Challenges, Issues, and Needs

2011 (Summer Short Course) – Tsinghua University, China

Topic: Software Test Automation

2010 (Invited Talks) – Tsinghua University, China

Topic: Cloud-Based Software Testing – Issues, Challenges, and Opportunities
Topic: Scalability Testing and Measurement for Cloud-Based Systems

June/2009 – Fu Jen Catholic University, Taipei, R.O China

Invited Talk:

Topic: “Software Test Automation – Problems, Solutions, and Future Needs”

Invited Talk:

Topic: “2D Barcode-Based Mobile Commerce Systems”

January/2009 – Huawei Technologies LTD, Shenzhen, China

Invited Talk:

“Service-Oriented Software Testing – Challenges and Issues”

2007 (Summer Short Course) – Peking University, Beijing, China

- Topic: “Design for Mobile-Based Software and Applications”

2006 – Ming De College of Northwestern Polytechnical University, Xian, China

- Topic: “Education, Training and Research in Testing and Quality Assurance in USA”

2004 – Computer Science Department, Naval Postgraduate School, California, USA

- Topic: “*Testing in the Component Age*”

2002 – Cisco Systems

- Topic: “*Performance Testing for Web-Based Software Systems*”

2000 – ASPECT Communications, San Jose.

- Topic: “*Performance Testing and Measurement for Web-Based Distributed Systems*”

1999 – IEEE Industry Engineering Chapter at San Jose

- Topic: *Introduction to E-Commerce*

1998 – San Jose State University

- Topic: *“Web-Based Software Engineering”*

1997 – Fujitsu Limited in Japan.

- Topic: *“Web-Based Software Engineering Environment”*

1995 – The University Of Texas at Houston

- Topic: *“An Regression Testing Methodology for Object-Oriented Software”*

1995 – The California State University At Fullerton

- Topic: *“An Regression Testing Methodology for Object-Oriented Software”*

1995- Professional Industry Working Group in Dallas

- Topic: *“Object-Oriented Software Testing” Invited Keynotes and Technical*

**Technical and
Professional Activities**

- Workshop Chair, AST 2014, India, June, 2014.
- Conference Co-Chair of IEEE 2nd MobileCloud2014, Oxford, UK, April 7-10, 2014.
- Conference Co-Chair of IEEE Seventh International Symposia on Service-Oriented System Engineering (SOSE2013), San Francisco Bay, USA, 2013.
- Program Co-Chair of IEEE International Symposia on Mobile Cloud Computing and Service (MobileCloud2013), San Francisco Bay, USA, 2013.
- Conference Chair of the 23rd International Conference on Software Engineering and Knowledge Engineering (SEKE2011), 2011, USA.
- Program Chair of the IEEE Sixth International Symposia on Service-Oriented System Engineering (SOSE2011), USA, 2011.
- Workshop Chair of the IEEE seventh International Workshop on Mobile Commerce and Healthcare Service (WMCS2011), Taiwan, 2011.
- Program Chair of the 22nd International Conference on Software Engineering and Knowledge Engineering (SEKE'2010), July 1-3, 2009, San Francisco, USA.
- Co-Workshop Chair of the International Workshop on Software Test Automation, Practice, and Standardization, Conjunction in SEKE2010, July, 2010, USA.
- Workshop Chair of the IEEE sixth International Workshop on Mobile Commerce and Service (WMCS2010), Taiwan, 2010.
- Co-Program Chair of the 21th International Conference on Software Engineering and Knowledge Engineering (SEKE'09), July 1-3, 2009, Boston, USA.
- Co-workshop chair for the Fifth International workshop on Mobile Commerce and Services (WMCS2009), Qingdao, China, June 4-6, 2009.
- Co-Chair of the Second International Workshop on Engineering of Mobile-Based Applications and Network Systems (EMOBS2009), Seattle, USA, July, 2009.
- Co-Organizer for A Special Program Track on Software Test Automation and Practice for Twentieth of International Conference on Software Engineering and Knowledge Engineering (SEKE'08), San Francisco, USA, July, 2008.
- Co-Organizer and Co-Chair of the Panel of Software Testing Practice and Automation for the Twentieth of International Conference on Software Engineering and Knowledge Engineering (SEKE'08), San Francisco, USA, July, 2008.

- Program Co-Chair for the Twentieth of International Conference on Software Engineering and Knowledge Engineering (SEKE'08), San Francisco, USA, July, 2008.
- Workshop Co-Chair for the Four International Workshop on Mobile Commerce and Services, at Kunming, China, in May 2008.
- Workshop Co-Chair for the First International Workshop on Engineering Wireless-Based Systems and Applications (EMOBS2007), Beijing, July, 2007.
- One of the workshop organizers for the First International Workshop on Software Testing for Emerging Technologies (TEST'07), Beijing, July, 2007.
- Program Track Chair for the Nineteenth International Conference on Software Engineering and Knowledge Engineering (SEKE'07), Boston, USA, July, 2007.
- Workshop Co-Chair for the First International Workshop on Engineering Wireless-Based Systems and Applications (EMOBS2007), Beijing, July, 2007.
- Co-Chair for the First International Workshop on Evaluation and Evolution of Component Composition (EECC 2006), San Francisco, USA, July 5-7, 2006.
- Session chair and PC member for The Eighteenth International Conference on Software Engineering and Knowledge Engineering (SEKE'06) will be held in Hotel Sofitel, San Francisco Bay, USA, July 5-7, 2006.
- Co-Chair for the Second International Workshop on Testing and Quality Assurance for Component-Based Software (TQACBS'2006) in conjunction with COMPSAC 2006, Chicago, USA, and September. 18-21, 2006.
- Session Chair for the 2nd International Conference on Embedded Software and Systems, NPU, Xi'an, China, December, 16-18,2005.
- Program Co-chair for the 8th International Conference for Young Computer Scientists (ICYCS'05) in Sept. 20-22, Beijing, China.
- Co-Chair and Session Chair for the First International Workshop on Testing and Quality Assurance for Component-Based Software (TQACBS'2005) in conjunction with COMPSAC 2005, Edinburgh, Scotland, July 25-28.
- Co-Chair and session chair for the second IEEE International Workshop and Mobile Commerce conjunction with IEEE CEC 2005, Munich, Germany, July 18-19, 2005.
- Session-Chair for the 29th Annual International Computer Software and Applications Conference (COMPSAC 2005), Edinburgh, Scotland, July 25-28.
- Co-Chair of the First IEEE International Workshop on Mobile Commerce and Services, conjunction with IEEE ECE International Conference, June 2004.

Program Committee Member for International Conferences and Workshops:

- Advisor Board Member for SEKE2012 and SEKE2013.
- PC member for ICEBE2012/CEC2012, September 9-11, 2012, Hangzhou, China.
- PC member for IEEE CEC2011, 2011.
- PC members for 11th International Conference, ICA3PP 2011, Melbourne, Australia, October 24-26, 2011.
- PC member for SOC-MAS11, 2011.
- PC member for QSIC 2010 - Quality of Service-Based Systems, 2010.
- PC member for SOSE2010.
- PC member for IEEE CEC2009, 2009.
- PC member for The 2nd IEEE International Workshop on Software Test Automation (STA 2010).
- Program Committee Member for The Eighth International Conference on Quality Software, Oxford, UK, October, 2008.

- Program Committee Member for CEC'08/EEE'08, 2008.
 - Program Committee Member for 4th Workshop on Advances in Model Based Testing (A-MOST 2008), in Norway, 2008.
 - Program Committee Member for the Seventh International Conference on Quality Software, Portland, Oregon, October, 2007.
 - PC Members for ROSATEA 2007 – The Role of Software Architecture for Testing and Analysis, Italy, 2007.
 - Member of Program Committee for the 2nd Workshop on Advances in Model-based Software Testing (A-MOST'07), co-located with the 18th IEEE International Symposium on Software Reliability Engineering ISSRE 2007.
 - PC Member for ROSATEA 2007 - The Role of Software Architecture for Testing and Analysis. The Federated Events (National Workshop) on Component-Based Software Engineering and Software Architecture.
 - PC Member for IEEE Joint 8th IEEE Conference on E-Commerce Technology (CEC' 07) and the 3rd IEEE Conference on Enterprise Computing, E-Commerce and E-Services (EEE' 07), Japan, 2007.
 - PC Member for IEEE 2007 IEEE International Conference on E-Business Engineering, (2007 IEEE ICEBE/SOAI), 2007.
 - PC member for The First IEEE International Conference on System Integration and Reliability Improvements, December 6-9, Hanoi, Vietnam (SIRI 2006).
 - Member of Program Committee for IEEE 2006 IEEE International Conference on E-Business Engineering, Shanghai, China (2006 IEEE ICEBE/SOAI), Oct. 24-26, 2006.
 - Member of Program Committee for IEEE Joint 8th IEEE Conference on E-Commerce Technology (CEC' 06) and the 3rd IEEE Conference on Enterprise Computing, E-Commerce and E-Services (EEE' 06), San Francisco, CA, June 26-29, 2006.
 - Member of Steering Program Committee for Third IEEE International Workshop on Mobile Commerce and Services (WMCS'06) in conjunction with IEEE ECE 2006.
 - Member of Program Committee for the 2nd Workshop on Advances in Model-based Software Testing (A-MOST'06), co-located with the 17th IEEE International Symposium on Software Reliability Engineering ISSRE 2006, November 6-7, 2006 – Raleigh, North Carolina, USA.
 - Serviced as an Invited National Science Foundation (NSF) Review Panelist 2004-2005.
 - Member of Program Committee for Third International Workshop on Advanced Issues of E-Commerce and Web-Based Information Systems (WECWIS 2001)
 - Local Arrangement Chair for The Third International Workshop on Advanced Issues of E-Commerce and Web-Based Information Systems (WECWIS 2001)
 - Member of Program Committee for *IEEE Requirement Engineering* (IEEE RE'97)
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- Book reviewers for McGraw-Hill Higher Education Science, Engineering & Mathematics in 2007.
 - Book reviewers for book publishers, John Wiley and Sons in 2004
 - Book reviewers for Artech House Publishers in 2003
 - Technical Editorial Committee Member for Journal of Theoretical and Applied Electronic Commerce Research (JTAER) (URL: <http://www.jtaer.com/>)
 - Referee for IEEE Transaction of Computer
 - Referee for ACM Transaction of Software Engineering Methodology
 - Referee for IEEE Transaction of Software Engineering
 - Referee for IEEE Transaction of Computer
 - Referee for IEEE Mobile Computing

- Referee for IEEE Computer
- Referee for IEEE Software
- Referee for IEEE Internet Computing
- Referee for Journal of System and Software
- Referee for Journal of Software Maintenance: Research and Practice
- Referee for Journal of Information Systems Frontiers
- Referee for Journal of Information and Technology

Awards Received

- Received the **Charles W. Davidson College of Engineering Faculty Award for Excellence in Scholarship** in 2013.
- Received the **KSI Fellow** from Knowledge System Institute in SEKE2011.
- Recognized as a **distinguished alumina** by the College of Engineering of the University of Texas at Arlington at its 50th Anniversary in November, 2009. <http://www.uta.edu/engineering/features/feature.php?id=14>
- Received the **Best Paper Award** from the Third International Conference on Multimedia and Ubiquitous Engineering (MUE2009), In Cooperation with the IEEE Computer Society, June 4-6, 2009, Qingdao, China.
- Selected as **the Best Paper** in The 8th International Conference for Young Computer Scientists (ICYCS'05) in Sept. 20-22, Beijing, China
- Named as Global Education Follower by San Jose State University in 2003
- Received **the Best Paper Award** in The 13th International Software/Internet Quality Week (QW2000).
- Received the **Best Paper Award** in The Third IEEE International Conference on Requirements Engineering (ICRE1998), 1998, Colorado Springs, Colorado, USA.
- Received 1993-1994 **Outstanding CSE graduate student research award** for outstanding research on the Ph.D. level.

Journal Editor Board

- Editorial Board Member – Journal of Theoretical and Applied Electronic Commerce Research (JTAER)
- Editorial Board Member – Software Engineering: An International Journal
- Associate Editor – International Journal of Software Engineering and Knowledge Engineering (IJSEKE)
- Viewpoint Editor for International Journal of Software Engineering and Knowledge Engineering (IJSEKE)

Global Education Experience

- Proposed and delivering SJSU Faculty Lead Program to offer SJSU students to study and live at Beijing University of Technology in the summer 2008.
- Proposed and delivered SJSU Faculty Lead Program to offer SJSU students to study and live at Beijing University of Technology in the summer 2006.
- Proposed and worked with CMPE department Chair (Dr. Sigurd Meldal) to prepared the joint degree program in M.S. Software Engineering between SJSU and Beijing University of Technology in China. The program has been approved by the leaders of both schools and WASC.

Research Interest & Projects

- Big Data Analytics System and Engineering
- Mobile Cloud Computing and Services
- Cloud Computing and Services
- Testing as a Service (TaaS)
- Engineering SaaS
- Modern Software Engineering Topics:
 - Cloud Testing and Automation
 - Component-Based Software Testing and Quality Assurance
 - Model-based Software Engineering and Testing Methods
 - Service-oriented software production, test, and evaluation
 - Software Test Generation and Automation
 - Mobile Computing and M-Commerce
 - Wireless Security, Validation, and Evaluation

Thesis and master project supervision

es in topics on Software Engineering, Software Testing, SOA-based engineering, ireless Commerce, Cloud Computing.
ter projects (240 master students) in software testing, test automation, and nent-based software engineering, cloud computing, mobile clouds.
ter projects (120 students) in IT technologies, wireless commerce and online commerce.

Proposed, Developed, Delivered Courses

- Mobile Cloud Computing
- Cloud Computing Technology (CMPE281)
- Software Test Automation (CMPE296X)
- Design of Wireless-Based Software Systems (CMPE235)
- Design of E-Commerce Systems (CMPE237)
- Design of Web-Based Application Systems (CMPE236)
- Introduction to WWW Technologies (CMPE234)
- Software Quality Testing (CMPE287)
- Computer-Aided Software Engineering
- Software Quality Assurance
- Mobile Programming In Java
- Software Engineering I
- Software Engineering II
- Algorithms and Data Structures with C++
- Object-Oriented Software Testing
- Advanced Object-Oriented Programming in C++
- Object-Oriented Design and Analysis

Professional Teaching Experience

Professional Courses/Short Courses:

- Spring 2008, IBM Silicon Valley Lab., San Jose, USA
 - Course Title: *Software Quality Testing*
- Spring, 2006, Intuit, in Mountain View, USA
 - Course Title: *Software Quality Testing- Advanced Topics*
- 2005, Summer– Huawei Technologies LTD, at Shenzhen, China
Topic: *Software Reuse – State-of-the-art Technology, Issues, Solutions,*

and Challenges

- 2005, March – UT Start COM at Shenzhen in China
Topic: *“Testing Component-Based Systems”*
- 2005, March – Huawei Technologies Ltd. At Shenzhen in China
Topic: *“Component-Based Software Production – Development and Management”*
- Summer, 2001, Cisco Systems, in San Jose
Course Title: *Design of E-Commerce Systems*
- Summer, 2000, HP, San Jose
Course Title: *Design of Web-Based Systems*
- 2000, UCLA
Course Title: *Using the Internet for Global Software Production*
- Summer, 1995, University of Texas at Arlington (Professional Summer Courses)
Course Title: *Object-Oriented Software Testing*
Course Title: *Advanced Programming in C++*