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(A detailed resume can be provided as requested)

Education

University of Southern California (USC) **Los Angeles, CA**
Doctor of Philosophy in Computer Science, expected May 2006
Dissertation: *Software Quality Analysis: A Value-Based Approach*
Advisor: Barry Boehm

University of Southern California (USC) **Los Angeles, CA**
Master of Science in Computer Science, May 2001

Hohai University **Nanjing, China**
Bachelor of Science in Engineering Management

Research Interests and Goals

My research interest is **software engineering**, with an emphasis on **software quality** and **value-based software engineering**. I am especially interested in models, processes and techniques for software quality assessment, achievement and improvement; and broadly in high dependability/performance computing, software metrics and modeling, process formalization and simulation, software reuse, COTS, software architecture, software evolution and empirical software engineering.

Brief Research Experience

01/2001 – current **Graduate Research Assistant in Center for Software Engineering (CSE)**
University of Southern California, **Los Angeles, CA**
Advisor: Barry Boehm

- Formalize the Value-Based Software Quality Achievement (VBSQA) process with Object Petri nets (OPN), prototyped the resulting VBSQA Process Generator with Java, and applied the VBSQA Process Generator in *Enterprise Resource Planning (ERP)* software development at Neusoft Co. Ltd in China.
- Chief software architect for Inspector SCROver robot platform developed for the NASA High Dependability Computing (HDCP) experimental technology testbeds.
- Led research of Software Quality/Dependability Modeling as well as Value-Based Software Quality/Dependability in USC-CSE.
- Led research of Value-Based Software Engineering in USC-CSE.

01/2000 – 12/2000 **Graduate Research Assistant in the Database Laboratory**
University of Southern California, **Los Angeles, CA**
Advisor: Shahram Ghandeharizadeh

- Investigated Continuous Multimedia Server under the direction of Prof. Shahram Ghandeharizadeh and published a paper entitled “A Cost Driven Disk Scheduling Algorithm

for Multimedia Object Retrieval” on IEEE Transactions on Multimedia, vol. 5, no. 2, June 2003.

- Database Lab HP Unix System Administrator responsible for system networking and security configuration

Teaching Experience

08/2001 – 05/2002 Teaching Assistant for Graduate Software Engineering I & II (CS577AB)
University of Southern California, Los Angeles, CA

Representative Papers

1. LiGuo Huang, Barry Boehm, Hao Hu, Jidong Ge, Jian Lu and Cheng Qian, “Applying the Value/Petri Process to ERP Software Development in China”, accepted and to appear in the Proceedings of 28th International Conference of Software Engineering (ICSE) 2006.
2. LiGuo Huang, Hao Hu, Jidong Ge, Barry Boehm, and Jian Lü, “Tailor the Value-Based Software Quality Achievement Process to Project Business Cases”, accepted and to appear in the Proceedings of Software Process Workshop (SPW) 2006, May 2006, LNCS.
3. LiGuo Huang and Barry Boehm, “How Much Software Quality Investment Is Enough: A Value-Based Approach”, accepted and to appear in IEEE Software.
4. LiGuo Huang, “A Value-Based Process for Achieving Software Dependability”, Proceedings of Software Process Workshop (SPW) 2005, May 2005, LNCS 3840.
5. Barry Boehm, LiGuo Huang, Apurva Jain, Ray Madachy, “The ROI of software dependability: The iDAVE model”, IEEE Software, vol. 21, no. 3, May/June, 2004, p 54-61.
6. Barry Boehm, LiGuo Huang, “Value-based software engineering: A case study”, IEEE Computer, vol. 36, no. 3, March 2003, p 33-41+4.
7. Barry Boehm, LiGuo Huang, “Value-Base Software Engineering: Reinventing ‘Earned Value’ Monitoring and Control,” ACM Software Engineering Notes, vol. 28, no. 2, March 2003.
8. LiGuo Huang and Barry Boehm, “Reasoning about the Value of Software Dependability: the iDAVE Model,” Supplementary Proceedings of 14th IEEE International Symposium on Software Reliability Engineering (ISSRE), November 2003, *Honored with the Student Travel Award*.
9. Daniel Port and LiGuo Huang, "Strategic Architectural Flexibility," Proceedings IEEE International Conference on Software Maintenance (ICSM), September 2003, p 389-396.
10. Barry Boehm, Daniel Port, LiGuo Huang, and Winsor Brown, “Using the Spiral Model and MBASE to Generate New Acquisition Process Models: SAIV, CAIV, and SCQAIV”, CrossTalk, vol. 15, no. 1, January 2002, pp. 20-25.
11. Shahram Ghandeharizadeh, LiGuo Huang, and Ibrahim Kamel, “A Cost Driven Disk Scheduling Algorithm for Multimedia Object Retrieval” IEEE Transactions on Multimedia, vol. 5, no. 2, June 2003.

Book Chapter

1. Barry Boehm and LiGuo Huang, “Value-Based Feedback in Software and Information Systems Development”, Software Evolution and Feedback, John Wiley and Sons, coming soon.