

Eunjee Song, Ph.D.

Associate Professor
Department of Computer Science
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RESEARCH INTERESTS

Software Engineering and Security:
Model-Driven Engineering, Aspect-Oriented Software Development, Access Control Property Formalization and Analysis, Software Design and Specification, Model Verification, Formal Methods.

EDUCATION

- Ph.D.** **Computer Science**, Colorado State University, **May 2007**
Dissertation title: *An Aspect-based Approach to Modeling Access Control Policies*
Advisor: Dr. Robert France, Co-Advisor: Dr. Indrakshi Ray
- M.S.** **Computer Science**, Colorado State University, **August 2001**.
M.S. report title: *A Meta-Modeling Approach to Precise Specification of Pattern Properties*
Advisor: Dr. Robert France
- 2nd B.S.** **Computer Engineering**, Seoul National University, Korea, **February 1991**
- B.S.** **Architecture**, Seoul National University, Korea, **February 1988**

EMPLOYMENT

- | | |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Associate Professor
Aug. 2013 – present | Department of Computer Science, Baylor University, Waco, TX |
| Assistant Professor
Jun. 2007 – Aug. 2013 | Department of Computer Science, Baylor University, Waco, TX |
| Lecturer
Aug. 2006 – May 2007 | Department of Computer Science, Baylor University, Waco, TX |
| Student Instructor
Jan. 2006 – May 2006 | Department of Computer Science, Colorado State University, Fort Collins |
| Graduate Research Assistant
Jul. 2004 – Jan. 2006 | Department of Computer Science, Colorado State University, Fort Collins. Project Title: <i>Aspect-Oriented Approach to Policy Specification</i> . Funded by Air Force Office of Scientific Research (AFOSR). (PI: I. Ray, Co-PI: R. France). |

Student Instructor Jul. 2001 – Dec. 2003 (3 Fall semesters)	Department of Computer Science, Colorado State University, Fort Collins
Summer Research Intern Jul. 2001	Qwest Telecommunication, Denver, Colorado Project Title: <i>Development of Repository-based Reuse Infrastructures.</i>
Graduate Teaching Assistant Jul. 1999 – May 2001	Department of Computer Science, Colorado State University, Fort Collins
Part-time Instructor Mar. 1997 – Jun. 1998	Department of Industrial Information, Tamna University, Jeju, Korea
Software Engineer Jan. 1991 – Feb. 1996	Korea Software Development Institute (KSDI), IBM Korea Inc., Seoul, Korea

SCHOLARLY ACTIVITY

Refereed Publications (Journals and Proceedings)

1. Sangsig Kim, Dae-Kyoo Kim, Lunjin Lu, **Eunjee Song**, “Building hybrid access control by configuring RBAC and MAC features”, *Information & Software Technology* 56(7): 763-792 (2014)
2. Tomas Cerny, Karel Cemus, Michael J. Donahoo, **Eunjee Song**, “Aspect-driven, Data-reflective and Context-aware User Interfaces Design”, *ACM SIGAPP Applied Computing Review* Dec. 2013, Vol. 13, No. 4, pp. 53-66
3. Jun Lin, **Eunjee Song**, Nankai Pan, Hanil Kim, “Using Aspects to Improve Software Test Observability”, *Journal of Information*, Volume 16 (8B), pp. 6301-6314, 2013.
4. Tomas Cerny, Michael J. Donahoo, **Eunjee Song**, “Towards Effective Adaptive User Interfaces Design”, the 8th ACM Symposium on Research in Applied Computation (RACS) 2013, Montreal, QC, Canada, October, 2013. Acceptance rate: 23%.
5. Jun Lin, Jonathan Drake, **Eunjee Song**, Hanil Kim, "Framework-Based Approach for Interactive Multimedia Application", the 7th ACM Symposium on Research in Applied Computation (RACS) 2012, pp. 364-370, San Antonio, TX, October, 2012. **Acceptance rate**: 23%.
6. Nankai Pan, **Eunjee Song**, "An Aspect-Oriented Testability Framework", the 7th ACM Symposium on Research in Applied Computation (RACS) 2012, pp. 356-363, San Antonio, TX, October, 2012. **Acceptance rate**: 23%. [**Best Conference Paper Award, one of two best papers**]
7. Sanjeev Arora, **Eunjee Song**, Yoonjeong Kim, "Modified Hierarchical Privacy-aware Role Based Access Control Model", the 7th ACM Symposium on Research in Applied Computation (RACS) 2012, pp. 344-347, San Antonio, TX, October, 2012 (for Short Paper and Poster Presentation).
8. Tomas Cerny, **Eunjee Song**, "Model-Driven Rich Form Generation", the *Journal of Information*, Special Issue on Research in Applied Computation, Vol. 15, No. 7, July 2012, pp. 2695-2714, International Information Institute. [indexed by SCI (Science Citation Index) Expanded] **Impact factor**: 0.25
9. Tomas Cerny, **Eunjee Song**, "UML-based Enhanced Rich Form Generation", *ACM International Conference on Research in Applied Computation Symposium (RACS) 2011*, pp. 192-199, Miami, FL, November, 2011. **Acceptance rate**: 25%
10. Wuliang Sun, **Eunjee Song**, Paul C. Grabow, Devon M. Simmonds, “Toward an Integrated Tool Environment for Static Analysis of UML Class and Sequence Models”, *Journal of Universal Computer Science*, vol. 16, no. 17, pp. 2435-2454, 2010. [indexed by SCI Expanded] **Impact factor**: 0.398, **5-yr impact factor**: 0.489

11. Tomas Cerny, **Eunjee Song**, "A Profile Approach to Using UML Models for Rich Form Generation", International Conference on Information Science and Applications (ICISA) 2010, Seoul, Korea, April, 2010.
12. Yoonjeong Kim, **Eunjee Song**, "Privacy-aware Role Based Access Control Model: Revisited for Multi-Policy Conflict Detection", International Conference on Information Science and Applications (ICISA) 2010, Seoul, Korea, April, 2010.
13. Vidhi Thapa, **Eunjee Song**, Hanil Kim, "An Approach to Verifying Security and Timing Properties in UML Models", 15th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS) 2010, St. Anne's College, University of Oxford, March, 2010. **Acceptance rate**: 23% (24/103)
14. Wuliang Sun, **Eunjee Song**, Paul C. Grabow, Devon M. Simmonds, "XMI2USE: A Tool for Transforming XMI to USE Specifications", 5th International Workshop on Foundations and Practices of UML (FP-UML) in conj. with 28th International Conference on Conceptual Modeling (ER) 2009, Gramado, Brazil, November, 2009. **Acceptance rate**: 41.6%
15. Devon M. Simmonds, Y. Raghu Reddy, **Eunjee Song**, Emanuel Grant, "A Comparison of Aspect-Oriented Approaches to Model Driven Engineering", International Conference on Software Engineering Research & Practice (SERP) 2009, Las Vegas, NV, July, 2009.
16. Nathan V. Roberts, **Eunjee Song**, Paul C. Grabow, "Model Interfaces for Two-Way Obliviousness" Proceedings of Software Engineering Track in 24th Annual ACM Symposium on Applied Computing (SAC), Honolulu, HI, March, 2009. **Acceptance rate**: 29%
17. **Eunjee Song**, Hanil Kim, Wuliang Sun, "A Property-based Verification Approach in Aspect-Oriented Modeling", Short Paper/Poster Session in 24th Annual ACM Symposium on Applied Computing (SAC), Honolulu, HI, March, 2009.
18. **Eunjee Song**, Robert France, Indrakshi Ray, and Hanil Kim, "Checking Policy Enforcement in an Access Control Aspect Model", the Journal of Information, Special Issue on Convergence Computing, Vol. 11, No. 5, September 2008, pp. 541-552, International Information Institute. [indexed by SCI Expanded]
Impact factor: 0.25
19. Paul Edelman and **Eunjee Song**, "Attack Patterns and Secure Software Design", Proceedings of the International Conference on Convergence Technology and Information Convergence (CTIC) '08, Jeju, Korea, November 2008.
20. **Eunjee Song**, Shuxin Yin, and Indrakshi Ray, "Using UML to Model Relational Database Operations", Computer Standards & Interfaces, Volume 29, Issue 3, Elsevier, March 2007, pp. 343-354. [indexed by SCI Expanded] **Impact factor**: 1.257, **5-yr impact factor**: 1.118
21. **Eunjee Song**, Robert France, Indrakshi Ray, and Hanil Kim, "Checking Policy Enforcement in an Access Control Aspect Model", Proceedings of the International Conference on Convergence Technology and Information Convergence (CTIC) '07, Anaheim, CA, November 2007.
22. Y. R. Reddy, Sudipto Ghosh, Robert B. France, Greg Straw, J. M. Bieman, Nathan McEachen, **Eunjee Song**, and Geri Georg, " Directives for Composing Aspect-Oriented Design Class Models", Transactions on Aspect-Oriented Software Development, LNCS Volume 3880, Springer-Verlag, pp. 75-105, 2006.
23. **Eunjee Song**, Raghu Reddy, Robert B. France, Indrakshi Ray, Geri Georg, and Roger Alexander, "Verifiable Composition of Access Control and Application Features", 10th ACM Symposium on Access Control Models and Technologies (SACMAT) 2005, Stockholm, Sweden, June 1-3, 2005. **Acceptance rate**: 21%
24. Robert B. France, Dae-Kyoo Kim, **Eunjee Song**, and Sudipto Ghosh, "Using Roles to Characterize Model Families", 10th OOPSLA Workshop on Behavioral Semantics: Back to the Basics, October 15, 2003. (Refereed)

25. Robert B. France, Dae-Kyoo Kim, Sudipto Ghosh, and **Eunjee Song**, "UML-Based Pattern Specification Technique", IEEE Transactions on Software Engineering. Vol. 30, number 3, pp 193-206, March 2004. [indexed by SCI] **Impact factor**: 1.980, **5-yr impact factor**: 3.083
26. Robert B. France, Sudipto Ghosh, **Eunjee Song**, and Dae-Kyoo Kim, "A Metamodeling Approach to Pattern-based Model Refactoring", IEEE Software Special Issue on Model-Driven Development, Vol.20. No.5. September/October 2003. [indexed by SCI] **Impact factor**: 1.508, **5-yr impact factor**: 1.443
27. Dae-Kyoo Kim, Robert B. France, Sudipto Ghosh, and **Eunjee Song**, "A UML-Based Metamodeling Language to Specify Design Patterns", In Proceeding of Workshop on Software Model Engineering (WiSME) in conj. with UML 2003, San Francisco, CA, October 2003.
28. Greg Straw, Geri Georg, **Eunjee Song**, Sudipto Ghosh, Robert B. France, and James M. Bieman, "Model Composition Directives", the 7th International Conference on Unified Modeling Language (UML), Lisbon, Portugal, October 10-15, 2004.
29. Dae-Kyoo Kim, Robert B. France, Sudipto Ghosh, and **Eunjee Song**, "A Role-Based Metamodeling Approach to Specifying Design Patterns", 27th Annual International Computer Software and Applications Conference (COMPSAC), Dallas, TX, November 3-6, 2003.
30. Dae-Kyoo Kim, Robert B. France, Sudipto Ghosh, and **Eunjee Song**, "Using Role-Based Modeling Language (RBML) as Precise Characterizations of Model Families," 8th IEEE International Conference on Engineering of Complex Computer Systems (ICECCS), Greenbelt, MD, December 2-4, 2002.
Acceptance rate: 44%
31. Sudipto Ghosh, Dae-Kyoo Kim, Robert B. France, and **Eunjee Song**, "Using Role Models as Precise Characterizations of Model Families", 11th OOPSLA Workshop on Behavioral Semantics: Serving the Customer, November 4, 2002.
32. **Eunjee Song**, Robert B. France, Dae-Kyoo Kim, and Sudipto Ghosh, "Using Roles for Pattern-Based Model Refactoring", Workshop on Critical Systems Development in conj. with UML (CSDUML), September 30 - October 4, 2002, Dresden, Germany.

Book Chapter

1. Robert B. France, Dae-Kyoo Kim, **Eunjee Song**, and Sudipto Ghosh, "Using Roles to Characterize Model Families", Practical Foundations of Business and System Specifications, pp. 179-195. Haim Kilov, Editor, Kluwer Academic Publisher. August, 2003, ISBN: 1402014805

Doctoral Dissertation

1. **Eunjee Song**, "An Aspect-based Approach to Modeling Access Control Policies", Colorado State University, May 2007

Other Short Papers/Posters

1. Yoonjeong Kim, Hyun-Hea Na, Ji-Youn Lee, and **Eunjee Song**, "An Arithmetic Operation Implementation Strategy for Privacy-Aware Role-Based Access Control", Poster Presentation at the 20th USENIX Security Symposium, San Francisco, CA, August, 2011. (Refereed)
2. **Eunjee Song**, "Toward an Integrated Tool Environment for Verifying Security and Timing Properties in UML Models", Poster Presentation at 11th KOCSEA (Korean Computer Scientists and Engineers Association in America) Technical Symposium, Vienna, VA, November, 2010. (Invited)

3. **Eunjee Song** and Nathan V. Roberts, “Verifiable aspect composition in UML models”, 2nd IEEE International Conference on Secure System Integration and Reliability Improvement (SSIRI 2008), Yokohama, Japan, July, 2008.
Citation count: 3/3
4. **Eunjee Song**, Robert B. France, and Indrakshi Ray, “A Rigorous Approach to Incorporating Access Control Features into Applications”, Poster Session in 8th International Conference on Model Driven Engineering Languages and Systems (MoDELS), Montego Bay, Jamaica, October 2005 (Refereed)
5. Jin-hee Ko, Eui-young Kang, Hanil Kim, and **Eunjee Song**, "A Comparison of Elementary Students' Web Searching Behaviors according to Personality Types", Discussion session in The 2005 International Conference on Frontiers in Education: Computer Science and Computer Engineering (FECS 2005), Las Vegas, NV, June 20-23, 2005
6. **Eunjee Song**, Indrakshi Ray, and Robert B. France, "A Formal Approach to Incorporating Access Control Features into Applications”, Poster Session at Information Science and Technology Colloquium, Fort Collins, CO, April, 2005.
7. **Eunjee Song**, Indrakshi Ray, and Robert B. France, "A Formal Approach to Incorporating Access Control Features into Applications”, Poster Session at Computer Science Research Symposium, Fort Collins, CO, April, 2005.

Technical Report

1. Robert B. France, Dae-Kyoo Kim, and **Eunjee Song**, "Role-Based Modeling Language (RBML) Specification V1.0", Technical Report 02-106, Computer Science Department, Colorado State University, 2002

Software developed

1. XMI2USE¹ (with my former student Wuliang Sun). This software is an MDA-based model transformation tool, which generates a USE specification file from an XMI file that is exported by an EMF-based UML modeling tool such as IBM Rational Software Architect.

Invited Talks/Presentations

1. “UML-based Enhanced Rich Form Generation”, Presentation at ACM Research in Applied Computation Symposium (RACS) 2011, Miami, FL, November, 2011
2. “Using Model-Driven Engineering (MDE) Techniques for Complex Software Development”, Baylor/CTU Joint Workshop, Czech Technical University, Prague, Czeck Republic, September, 2011
3. “Using Model-Driven Engineering (MDE) Approaches in Complex Software System Development”, Invited Talk at IBM Watson Research, Hawthorne, NY, March, 2011
4. “Toward an Integrated Tool Environment for Verifying Security and Timing Properties in UML Models”, Poster Presentation at 11th KOCSEA (Korean Computer Scientists and Engineers Association in America) Technical Symposium, Vienna, VA, November, 2010.
5. “Overview on Model-Driven Engineering (MDE) Approaches in Complex Software System Development”, Invited Talk at Division of Computer Engineering, Seoul Women’s University, Seoul, Korea, June 25, 2010.
6. “Overview on Model-Driven Engineering (MDE) Approaches in Complex Software System Development”, Invited Talk at Data Mining & Knowledge Engineering Lab, Hanyang University, Seoul, Korea, June 11, 2010

¹ <http://cs.baylor.edu/~song/xmi2use.html>

7. “Overview on Model-Driven Engineering (MDE) Approaches in Complex Software System Development”, Invited Talk at SERC-FIT Project Seminar, Dankook University, Yongin, Korea, June 10, 2010.
8. “Overview on Model-Driven Engineering (MDE) Approaches in Complex Software System Development”, Invited Talk at Division of Multimedia Science, Sookmyung Women’s University, Seoul, Korea, June 9, 2010.
9. “An Approach to Verifying Security and Timing Properties in UML Models”, Presentation at 15th IEEE International Conference on Engineering of Complex Computer Systems, St. Anne's College, University of Oxford, March, 2010
10. “Overview on a Model-Driven Engineering (MDE) Approach for Complex Software Development”, Invited Talk at Baylor Physics Department Colloquium, February, 24, 2010
11. “XMI2USE: A Tool for Transforming XMI to USE Specifications”, 5th International Workshop on Foundations and Practices of UML (FP-UML) in conj. with 18th International Conference Conceptual Modeling (ER 2009), Gramado, Brazil, November, 2009.
12. “A Property-based Verification Approach in Aspect-Oriented Modeling”, Poster Presentation at Texas Research Exchange Fest '09, Texas A&M University, College Station, TX, September, 2009
13. “Model Interfaces for Two-Way Obliviousness”, Paper Presentation at 24th Annual ACM Symposium on Applied Computing (SAC), Honolulu, HI, March, 2009.
14. “A Property-based Verification Approach in Aspect-Oriented Modeling”, Poster Presentation in 24th Annual ACM Symposium on Applied Computing (SAC), Honolulu, HI, March, 2009.
15. “A Rigorous Approach to Incorporating Access Control Features into Applications”, Invited Talk at 9th KOCSEA (Korean Computer Scientists and Engineers Association in America) Technical Symposium, Vienna, VA, October 25th to 26th, 2008
16. Research Presentation to NSF Program Directors, Dr. Karl Levitt (Cyber Trust & Trustworthy Computing, CISE) and Dr. Sol Greenspan (CCF Core and Software Engineering, CISE), Arlington, VA, October 24th & 27th, 2008
17. “Checking Policy Enforcement in an Access Control Aspect Model”, Int’l Conference on Convergence Technology and Information Convergence (CTIC) 2007, Anaheim, CA, November 2, 2007
18. “Aspect-based Model-Driven Software Development: Part 1 & 2”, IT Research Center (ITRC), Jeju, Korea, July 18-19, 2007.
19. “An Aspect-Based Approach to Modeling Access Control Policies”, Department of Computer Education, Cheju National Univ., Jeju, Korea, July 12, 2007
20. “Study abroad at IT-related graduate programs in US and career opportunities after graduation”, Women in Science and Engineering (WISE), Jeju, Korea, July 12, 2007
21. “Verifiable Composition of Access Control and Application Features”, 10th ACM Symposium on Access Control Models and Technologies (SACMAT) 2005, Stockholm, Sweden, June 1-3, 2005.

GRADUATE STUDENTS MENTORED

Current Student:

- Xiyan Cao, M.S. Candidate, Fall 2010 – present. AssetWorks, San Antonio, TX

Master's degrees supervised as committee chairperson:

- Jun Lin, M.Sc. in Computer Science, Aug. 2013. Project title: “Improving Software Testability by Using Precisely Defined Models,” now in National Instruments Co., Austin, TX

- Wuliang Sun, M.Sc. in Computer Science, May 2010, Thesis Title: “An OCL-based Verification Approach to Analyzing Static Properties of a UML Model,” currently PhD Student at Colorado State Univ.
- Vidhi Thapa, M.Sc. in Computer Science, Dec. 2009, Project title: “OCL-Based Validation of Security and Timing Requirements”
- Nathan V. Roberts, M.Sc. in Computer Science, Aug. 2008, Thesis Title: “Two-Way Obliviousness in General Aspect-Oriented Modeling,” currently PhD Student at UT Austin

Department/Outside committee member for the following students:

- Diego Estrada, M.S. in Electrical & Computer Engineering, August 2013, Thesis: Implementation of a Multi-Agent System in Java Agent Development Framework for a Large-Scale Fossil-Fuel Electrical Power Unit Control
- Petr Praus, M.S., in Computer Science, August 2013, Project title: Multicurrency and Money Supply Control in Proof-of-Work Virtual Currencies
- Craig S. Williams, M.S. in Electrical & Computer Engineering, August 2011, Thesis Title: Design and Implementation of a Multi-Agent Optimized Control System for a Large-Scale Fossil-Fuel Electrical Power Unit
- Chengsen Song, M.S. in Computer Science, August 2011, Project title: A Testbed for Networked Control Systems
- Yao Yao, M.S. in Computer Science, August 2011, Project title: MovieOracle System
- Kevin Rooney, M.S. in Computer Science, July 2011, Project title: New Certificate and Web Services for the ACM-ICPC Contest Management System
- George Montanez, May 2011, Thesis title: Information Storage Capacity of Genetic Algorithm Fitness Maps.
- Zhuocheng Yang, M.S. in Electrical & Computer Engineering, July 2010, Thesis Title: Remotely Sensed Hyperspectral Image Unmixing

TEACHING EXPERIENCE

At Baylor University

- **Advanced Software Engineering: CSI5354** (Graduate level) Spring 2012, Spring 2011, Spring 2010, Spring 2009, Spring 2008
- **Software Engineering: CSI5324** (Graduate level) Fall 2014, Fall 2013, Fall 2012, Fall 2011, Fall 2010, Fall 2009, Fall 2008, Fall 2007, Fall 2006
- **Software Quality Assurance & Testing: CSI3373** (Junior/Senior level) Fall 2014, Spring 2014, Spring 2013, Spring 2012, Spring 2011, Spring 2011
- **Software Engineering II: CSI3372** (Junior/Senior level) Fall 2014, Fall 2013, Fall 2012, Fall 2011, Fall 2010, Spring 2010, Fall 2009, Spring 2009
- **Capstone Design Project (Senior Level)** Spring 2014, Spring 2013
- **Principles of Software Design: CSI3342** (Junior/Senior level) Spring 2008, Spring 2007
- **Discrete Structures: CSI2350** (Freshman/Sophomore level) Fall 2008, Fall 2007

At Colorado State University

- **Software Specification & Design: CS517DL** (Graduate level on-line course) Spring 2006
- **Object-Oriented Design: CS414DL** (Senior/Graduate level on-line course) Fall 2003, Fall 2002, Fall 2001
- **Software Development Methods: CS314** (Junior/Senior level) Spring 2002, Spring 2001, Fall 2000. (Graduate Teaching Assistant)
- **Discrete Structures: CS166** (Freshman/Sophomore level) Spring 2000, Fall 1999. (Graduate Teaching Assistant)

At Tamna University, Jeju, Korea.

- **Computer Architecture** (Junior level) Fall 1997, Spring 1997.
- **Introduction to Computer Science** (Freshman level) Spring 1998.
- **Utilization of Computer and Applications** (Computer literacy course for non-CS major students) Spring 1998, Fall 1997, Spring 1997.

GRANT ACTIVITY**Grants – awarded (external grants in bold)**

1. **“Development of virtual memory system on multi-server and application software to provide real-time processing of exponential transaction and high availability service”, Ministry of Knowledge Economy (MKE), Korea, \$9,000 (Co-PI with other four co-PIs from two universities, one research institute and one company in Korea², total \$4.4M for three years), awarded for Summer 2013.**
2. **FWMSH University Research Partnership Grant, Fort Worth Museum of Science & History (FWMSH), \$6,000 + Equipments (approx. \$1,500), 8/2012-12/2012 (PI), “FWMSH user interaction innovation project”, awarded for Fall 2012, to be extended for Spring 2013.**
3. Summer Sabbatical, Baylor University, 6/2012-7/2012, *“A UML-based Constraints Analysis Approach”*.
4. **FWMSH University Research Partnership Grant, Fort Worth Museum of Science & History (FWMSH), \$12,000 + Equipments (approx. \$1,000), 8/2011-5/2012 (PI), “Enhancement of the Energy City Exhibit”, first awarded for Fall 2011, renewed for Spring 2012, completed.**
5. 2011 KEEN Innovation Grant from the Kern Family Foundation, \$1,500, 12/2010-7/2011, *“Planning and Implementation of Testing Practice Studio for CSI3373”*
6. **Study on the Organization of Secure Web Environment, National Research Foundation (NRF) of Korea, \$1,800 (sub-project title: Privacy-aware Role-based Access Control), 1/2011-12/2012 (PI: Dr. Yoonjeong Kim, Seoul Women’s University, Korea).**
7. **New Generation Financial Software Framework based on Software Engineering Methodology and Financial Engineering Knowledge Base, The National IT Industry Promotion Agency NIPA, \$2,500 (travel support on visiting Korea for an inviting talk and joint meeting, June 2010), (PI: Dr. Jongmoo Choi, Dankook University, Korea)**
8. Summer Sabbatical, Baylor University, 7/2010, *“A UML-Based Approach to Specifying and Analyzing Security Properties in Temporal Domain”*.
9. Young Investigator Development Program (YIDP) grant, Baylor University, \$21,000, 6/2009-5/2010 (PI), *“A Verifiable Composition Approach for Trustworthy System Development”*.
10. University Research Committee (URC) grant, Baylor University, \$7,500, 6/2009-5/2010 (Co-PI, with Dr. Randal L. Vaughn, Department of Information Systems), *“Security Intelligence Cooperative”*.
11. University Research Committee (URC) grant, Baylor University, \$5,100, 6/2007-5/2008 (PI), *“Aspect Oriented Design of Trustworthy Software”*.
12. New faculty start-up grant from Baylor University, 6/2007 – 5/2010 (PI).

Proposals – submitted, not awarded

² Seoul National University, Seoul National University of Science and Technology, Korea Electronics Technology Institute and Winway Systems Inc.

1. “*A Lightweight Framework for Constraints Violation Investigation in Evolving Models*”, National Science Foundation (NSF) Trustworthy Computing (TC) program, \$133,092 (PI), submitted on December 17, 2010.
2. “*A collaborative research on Software Engineering Curricula & Teaching Material Repository*”, NSF International Research and Education: Planning Visits and Workshops (NSF 04-035), \$59,659 (Co-PI with other nine co-PIs from six universities), Submitted on September 20, 2010.
3. “*Aspect-based Model Analysis Techniques for Dependable Information Systems*,” Sloan Research Fellowships (PI), Submitted on September 15, 2010.
4. “*Aspect-based Model Analysis Techniques for Defense Information Systems*,” Defense Advanced Research Projects Agency (DARPA), DSO, Phase I of the Computer Science Study Group (CSSG) (PI), \$82,000 for 1st year (PI), submitted in August 2009
5. “*Verifiable Composition of Access Control and Application Features*,” National Science Foundation (NSF) Cyber Trust (CT) program, \$251,389 (PI), submitted in March 2008

HONORS/AWARDS

Best Conference Paper Award 2012	Best Conference Paper Award at the 6 th Annual Research in Applied Computation Symposium (RACS) 2012 Sponsored by ACM SIGAPP
Anita Reed Teaching Award 2004	Computer Science Department, Colorado State University <ul style="list-style-type: none"> • Awarded annually to a graduate student in Computer Science with demonstrated dedication to education and excellence in teaching.
IBM Informal Awards 1996, 1995, 1992	IBM Korea Inc., Seoul, Korea <ul style="list-style-type: none"> • Awarded for the following accomplishments as a software engineer: new service contracts from marketing promotions targeting customer executives (1996), quality development of Business Application System/400 and appreciation from customer executives in consulting and demonstration sessions (1995), contribution to gathering and validating requirements for Hospital Information System (MedSolution) Series (1992)

ACADEMIC SERVICE

Program Committee

- ACM SIGAPP Symposium on Applied Computing (SAC), 2008, 2009, 2010, 2011, 2012, 2013, 2014
- ACM SIGAPP Research in Applied Computation Symposium (RACS), 2010, 2011, 2012, 2013
- IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom), 2011
- IEEE International Workshop on High Performance and Transparent Computing (HPTC), 2013
- International Workshop on Secure systems methodologies using patterns (SPattern) , 2010
- International Conference on Convergence Technology and Information Convergence (CTIC), 2007, 2008, 2009
- IEEE International Conference on Secure System Integration and Reliability Improvement (SSIRI), 2008
- IEEE International Conference on the Application of Digital Information and Web Technologies (ICADIWT), 2008

Journal and Conference Reviewer

- ACM SIGAPP Symposium on Applied Computing (SAC) 2008, 2009, 2010, 2011, 2012

- ACM International Conference on Research in Applied Computation Symposium (RACS), 2010, 2011, 2012
- Computer Standards & Interfaces, 2009, 2012, 2013
- ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), 2009
- Conference on Convergence Technology and Information Convergence (CTIC) 2007, 2008, 2009
- International Conference on Software Engineering (CONSEG), 2013.
- Iranian Journal of Electrical and Computer Engineering (IJECE), 2008
- IEEE International Conference on Secure System Integration and Reliability Improvement (SSIRI) 2008
- IEEE International Conference on the Application of Digital Information and Web Technologies (ICADIWT) 2008
- IEEE International Symposium on Software Reliability Engineering (ISSRE), 2005, 2008
- Journal of Scientific Practical & Computing (SPC), 2007
- Journal of Autonomic and Trusted Computing (JoATC), 2006
- International Conference on Aspect-Oriented Software Development (AOSD), 2006
- ACM Symposium on Access Control Models and Technologies (SACMAT), 2005
- ACM / IEEE Model Driven Engineering Languages and Systems (MoDELS), 2005
- IFIP WG 11.3 Working Conference on Data and Applications Security, 2005
- International Conference on the Unified Modeling Language (UML), 2002.
- Software Quality Journal (SQJ), 2004

Professional Affiliations

- Member, Association of Computing Machinery (ACM), 2003- present
- Member, Institute of Electrical and Electronics Engineers, Inc. (IEEE), 2003 - present
- Member, Korean Computer Scientists and Engineers Association in America (KOCSEA), 2008 - present, Co-Editor (2009, 2010), Co-Secretary (2011, 2013)
- Member, Korean-American Scientists and Engineers Association (KSEA), 2008 - present,
- Member & Secretary, Upsilon Pi Epsilon (UPE), CS Honor Society, Colorado State University local chapter, 2005 – 2006

UNIVERSITY SERVICE

Department/School Service

- Graduate Faculty, 2006 - present
- Software Engineering (SE) Committee, 2006 - present
- Undergraduate Curriculum Committee, 2006 - present
- Recruitment and Retention Committee, 2006 - present
- ECS/LLC Advisory Board

University Service

- Campus Diversity Committee, 2012 - present
- Cyber Security Committee, 2011 - present
- Faculty Marshal, Commencements in Spring '13, Spring '11, Spring '10, Spring '09, Fall '08, Sprng '08 & Fall '07
- Faculty Participant, Kaleidoscope, Multicultural Recruitment Event, Spring '10