

INSUP LEE  
Curriculum Vitae \*

**Education**

- **Ph.D. in Computer Science**  
University of Wisconsin-Madison, May, 1983.  
Dissertation title: *DYMOS: A Dynamic Modification System*
- **M.S. in Computer Science**  
University of Wisconsin-Madison, December, 1978.
- **B.S. in Mathematics with Honors**  
University of North Carolina at Chapel Hill, May, 1977.

**Employment**

- 7/12-present, Distinguished Adjunct Professor, Department of Information and Communication Engineering, DGIST, Korea.
- 9/08-present, Director, PRECISE Center, School of Engineering and Applied Science, University of Pennsylvania, Philadelphia, PA
- 9/05-present: Cecilia Fidler Moore Professor of Computer and Information Science, University of Pennsylvania, Philadelphia, PA
- 3/08-6/08: Distinguished Visiting Professor, Korea University, Seoul, Korea
- 9/04-1/10: Consultant, Fremont Associates, LLC
- 9/03-present: Professor of Electrical and Systems Engineering (Secondary)
- 5/98-present: Director, Real-Time Systems Group (RTG) Lab, Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA
- 7/97-present: Professor, Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA
- 7/94-6/97: CSE Undergraduate Curriculum Chair, Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA
- 7/89-6/97: Associate Professor, Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA
- 6/89-9/00: Consultant, Computer Command and Control Company, Philadelphia, PA
- 7/83-6/89: Assistant Professor, Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA
- 1/83-5/83: Instructor, Computer Sciences Department, University of Wisconsin-Madison, Madison, WI
- 6/79-7/79: Visiting Research Assistant to Korean Institute of Science and Technology, Seoul, Korea, on a Scholarship from KSEA (Korean Scientist and Engineers Association in America)
- 1/78-12/82: Research/Teaching Assistant, Computer Sciences Department, University of Wisconsin-Madison, Madison, WI

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\*In SEAS Format; Updated on October 1, 2015.

## Awards and Honors

- Member, NRC’s Committee on 21st Century Cyber-Physical Systems Education, since Dec 2013.
- Appreciation Plaque, Ministry of Science, IT and Future Planning, South Korea, for Participation as Invited Speaker, Universal Linkage for Top Research Advisor (ULTRA) Program Forum, Aug 9, 2013.
- IEEE TC-RTS Outstanding Technical Achievement and Leadership Award, Dec 2008.
- The Edward M. Kennedy Award for Health Care Innovation 2007, CIMIT (Center for Integration of Medicine and Innovative Technology ), Medical Device “PnP” Interoperability Team, Julian Goldman (leader), Dave Arney, Insup Lee, et al.
- Member, President’s Council of Advisors on Science and Technology (PCAST) Networking and Information Technology (NIT) Technical Advisory Group (TAG), 2006-2007.
- DVP Speaker of IEEE Computer Society Distinguished Visitors Program (DVP), 2004-2006.
- IEEE Fellow “for contributions to the specification languages and verification tools for real-time systems,” 2001.
- KSEA Certificate of Appreciation “in recognition of excellent contribution to KSEA as Co-Chair of ICTS at the 2005 US-Korea Conference (UKC 2005).”
- IEEE Computer Society’s Certificate of Appreciation
  - “for your important contributions to ISORC 2006 as a Symposium Co-Chair, April 25, 2006.
  - “for his important contributions to the ISORC 2004 as Program Co-Chair,” May 12, 2004.
  - “for your important contributions to the development of the 1st IEEE CS Symposium on Object-oriented Real-time Distributed Computing program as Program Co-Chair,” April 20, 1998
  - “for an outstanding performance as co-chairs of the 1992 and 1993 Real-Time Systems Symposiums,” Feb 23, 1994.
- Board of Directors, Philip Jaisohn Memorial Foundation, Philadelphia, since 1995.
- ACM Certification of Appreciation “in recognition of advice and guidance to the University of Pennsylvania Programming Team at the ACM Allegheny Regional Scholastic Programming Contest.” Second Place, Allegheny Regionals, Division I, 1990.
- Honorary Masters Degree, University of Pennsylvania, 1989.

## Awards with Students and Postdoc Fellows

- Best Paper Award, ACM/IEEE International Conference on CPS (ICCPS), Robustness of Attack-resilient State Estimators, Miroslav Pajic, James Weimer, Nicola Bezzo, Paulo Tabuada, Oleg Sokolsky, Insup Lee and George J. Pappas, April 2014.
- Best Paper Award, IEEE Real-Time Systems Symposium (RTSS), Hoon Sung Chwa, Hyounghu Back, Sanjian Chen, Jinkyu Lee, Arvind Easwaran, Insik Shin and Insup Lee, Extending Task-level to Job-level Fixed Priority Assignment and Schedulability Analysis Using Pseudo-deadlines, Dec 2012.
- Best Student Paper Award, Miroslav Pajic, Zhihao Jiang, Insup Lee, Oleg Sokolsky and Rahul Mangharam, “From Verification to Implementation by Model Translation and a Pacemaker Case Study,” IEEE RTAS, April 2012.

- Co-Best Paper Award, CEAS '11, "Link Spamming Wikipedia for Profit," West, A.G., Chang, J., Venkatasubramanian, K., Sokolsky, O., and Lee, I., CEAS '11: 8th Annual Collaboration, Electronic Messaging, Anti-Abuse, and Spam Conference, Sept 2011.
- Dissertation Advisor, Bronze Prize, Samsung Electronics' Humantech Thesis Contest, Dissertation on "A Design Framework for Real-Time Embedded Systems with Code Size and Energy Constraints" by Insik Shin and Sheayun Lee, Feb 2005. (Co-advised with Professor Sang Lyul Min at SNU)
- Best Paper Award, IEEE Real-Time Systems Symposium (RTSS), "Periodic Resource Model for Compositional Real-Time Guarantees," (with Insik Shin) Dec 2003.

### **Professional Societies**

- Member of IEEE Computer Society
- Member of ACM (Association of Computing Machinery)
- Member of KOCSEA (Korean-American Computer Scientists and Engineers Association)
- Member of KSEA (Korean-American Scientists and Engineers Association)

### **Professional Activities - Editorial Boards**

- Editorial Board, ACM Transactions on CPS, since 2015.
- Founding Co-Editor-in-Chief, KIISE Journal of Computing Science and Engineering (JCSE), since Sept 2007.
- Editorial Board, *Formal Methods in System Design*, since 1996.
- Area Editor for Real-Time Systems, Embedded Systems, and Cyber-Physical Systems, *Journal of ACM*, since 2013.
- *Real-Time Systems: The International Journal of Time-Critical Computing Systems*: Associate Editor (2003-2010), Advisory Board since 2010.
- Editorial Board, Journal of Embedded Computing, since 2003.
- Editorial Board, *Journal of Electrical Engineering and Information Science*, 1998-2001.
- Editorial Board, *IEEE Transactions on Computers*, 1995-2000.

### **Professional Activities - Service and Leadership**

- Chair, ACM SIGBED - Special Interest Group on Embedded Systems, 2015-2017. (Elected)
- Chair, IEEE Computer Society Technical Committee on Real-Time System, 2003-2004.
- Vice Chair, IEEE Computer Society Technical Committee on Real-Time System, 2001-2002. (Elected)
- Naval Research Lab (NRL) External Research Review Panel for Information Technology S&T Program (1997, 2004)
- President, Philadelphia Chapter of KSEA (Korean-American Scientists and Engineers in America), 1990-1991.

### **Professional Activities - Steering and Advisory Committees**

- Steering Committee, Chair, ICCPS (since 2015)

- Advisory Committee, Body Sensor Network Contest, May 23, 2011. <http://bsncontest.org/>; IEEE RTCSA 2013.
- Advisory Board, CPS Summer School, Georgia Institute of Technology, June 22-26, 2009.
- Advisory Board, International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA) since 2004.
- Steering Committee, CPS Week (since 2008, Chair 2012), ES Week (2007-2013), ATVA (since 2004), ISORC (since 2010), Run-Time Verification (since 2002), CPS-VO Education Group (since 2011)
- Co-Chair, IEEE CS Technical Steering Committee on Embedded Systems, 2005-2006.
- Steering Committee, International Conference on Real-Time Computing Systems and Applications (RTCSA), 1996-2002.
- Executive Committee, ACM SIGBED (2006-2012)
- Executive Committee, IEEE CS Technical Committee on Real-Time Systems, 1994-1996, 2005-2012.
- Executive Committee, EMSOFT (2005-2013)
- Advisory Committee, IT Symposium, UKC 2007, Aug 9-12.
- Executive Committee, KOCSEA (Korean-American Computer Scientists and Engineers Association), 1995-2001.
- Steering Committee Chair, NRC '98, The 9th KSEA Northeast Regional Conference, Rutgers University, New Brunswick, NJ, March 6-7, 1998.

#### **Professional Activities - Conference and Workshop Chairs**

- General Co-Chair, CPSWeek 2013, Philadelphia.
- General Co-Chair, ICCPS 2012.
- Workshop Co-Organizer, SoSMD 2012.
- Program Co-Chair, ICCPS 2011.
- General Co-Chair, 1st Int. Conf. on Runtime Verification, Nov 1-4, 2010, Malta.
- Co-organizer, 2nd workshop on HCMDSS and MD PnP, CPS Week, San Francisco, April 2009.
- Co-organizer, CRTS (Compositional Real-Time Systems) Workshop. (Dec 2008, Dec 2009, Dec 2010)
- General Co-Chair, *Int. Conf. on Embedded and Real-Time Computing Systems and Applications (RTCSA)*, Taipei, Taiwan, Aug 2008.
- Workshop Co-Chair, *Workshop on Software and Systems for Medical Devices and Services (SMDS)*, Dec 3, 2008.
- Co-organizer, Joint workshop on High-Confidence Medical Devices, Software, and Systems/ Medical Device Plug-and-Play (HCMDSS/MD PnP). (Boston, June 25-27, 2007; San Francisco, April 16, 2009)
- Symposium Co-Chair, *IEEE ISORC*, Gyeongju, Korea, Apr 24-26, 2006.
- General Chair, *Int. Workshop on Automated Technology for Verification and Analysis (ATVA)*, Taipei, Taiwan, Oct 2005.

- Co-Chair, *Information & Communication Technology Symposium (ICTS)* KSEA UKC 2005, Aug 2005.
- Chair Organizer, High-Confidence Medical Device Software and Systems (HCMDSS) Workshop, Philadelphia, PA, June 2-3, 2005 ([www.cis.upenn.edu/hcmdss/](http://www.cis.upenn.edu/hcmdss/))
- Co-organizer, High-Confidence Medical Device Software and Systems (HCMDSS) Planning Workshop, Arlington, VA, Nov 16-17, 2004. ([www.cis.upenn.edu/hcmdss-planning/](http://www.cis.upenn.edu/hcmdss-planning/))
- Program Co-Chair, *IEEE Int. Symposium on Object-oriented Real-time distributed Computing (ISORC)* Vienna, Austria, May 12-14, 2004.
- Program Co-Chair, *Int. Workshop on Automated Technology for Verification and Analysis (ATVA)*, Taipei, Taiwan, Dec 10-13, 2003.
- Program Co-Chair, *Int. Conf. on EMSOFT*, Philadelphia, Oct 13-15, 2003.
- Program Co-Chair, *Monterey Workshop on Software Engineering for Embedded Systems: From Requirements to Implementation*, Chicago, Sep 24-26, 2003.
- General Co-Chair, *IEEE Int. Symposium on Object-oriented Real-time distributed Computing (ISORC)*. [Newport Beach, CA, March 15-17, 2000], [Kyounju, Korea, April 24-26, 2006]
- Program Co-Chair, *IEEE Int. Symposium on Object-oriented Real-time distributed Computing (ISORC)*, Kyoto, Japan, April 20-22, 1998.
- Program Co-Chair, *Int. Workshop on Real-Time Computing Systems and Applications (RTCSA)*, Seoul, Korea, Oct 30 - Nov 1, 1996.
- Conference Co-Chair, *CONCUR '95 – Int. Conf. on Concurrency Theory*, Philadelphia, PA, Aug 1995.
- Program Co-Chair, *Int. Workshop on Real-Time Computing Systems and Applications (RTCSA)*, Seoul, Korea, Dec 1994.
- General Co-chair, *IEEE Real-Time Systems Symposium*, Dec 1993.
- Program Co-Chair, *IEEE Real-Time Systems Symposium*, Dec 1992.
- Conference vice-chairman, *KSEA Northeast Regional Conference*, Lehigh University, Nov 1988.

#### Professional Activities - Program Committees

- RTSS: *IEEE Real-Time Systems Symposium* (1985-1988, 1990, 1992, 1996, 1998-2002, 2004, 2006, 2007, 2008, 2009, 2010, 2011, 2012)
- SIES 2013
- ISEP-IPP 2013
- DSMDS 2011
- EMSOFT: *ACM Conference on Embedded Software* (2003, 2004, 2005, 2008, 2011)
- ICHI (IEEE Int. Conference on Healthcare Informatics), 2013.
- ISORC: *IEEE Int. Symposium on Object-oriented Real-time distributed Computing* (1998, 2002-2005, 2007, 2009, 2010, 2012, 2013)
- RTAS: *IEEE Real-Time and Embedded Technology and Applications Symposium* (1990, 1998, 2000, 2001, 2004, 2007, 2009, 2015)

- ICCPS: *International Conference on Cyber-Physical Systems* (2010, 2013)
- SRDS *IEEE Symposium on Reliable Distributed Systems* (2012, 2013)
- DAC (2011)
- FTRA WCC-WTA 2011, The 7th International Symposium on Wireless sensor network Technologies and Applications for Smart Space (WTA 2011)
- CPNS (International Workshop on Cyber-Physical Networking Systems) (2011, 2012)
- RTCSA: *Int. Conference on Real-Time Computing Systems and Applications* (1994-1996, 1999, 2000, 2004, 2005, 2010, 2011, 2014)
- ECRTS: *Euromicro Conference on Real-Time Systems* (1999, 2003, 2004)
- ATVA: *Int. Symposium on Automated Technology for Verification and Analysis* (2003, 2004, 2006, 2007, 2009, 2010, 2011, 2012, 2013, 2014)
- ICTAC 2014
- ICCAD: Conference for Electronic Design Technology (2011, 2012)
- ICECCS (7th IEEE International Conference on Engineering of Complex Computer Systems) 2012.
- ICFEM (14th International Conference on Formal Engineering Methods) 2012.
- Wireless Health (WH) 2011, 2014, 2015
- BSN (Body Sensor Networks) 2010
- LCTES 2009, *ACM Conf. on Languages, Compilers, and Tools fro Embedded Systems*, Dublin, Irland
- FHIES *Int. Symposium on Foundations of Health Information Engineering and Systems* (2011, 2012, 2013, 2014)
- IEEE PIMRC 11, Wireless Networks and Health Care Track, Sept 2011, Toronto, Canada.
- FM2009, Eindhoven, the Netherlands.
- SSS (*Int. Symposium on Stabilization, Safety, and Security of Distributed Systems*) (2009, 2012)
- ICTAC (international Colloquium on Theoretical Aspects of Computing), Aug 2009.
- ACM SAC track on Real-Time Systems (2009, 2011)
- CSA (Int. Conf. on Computer Science and its Applications), Jeju, Korea, Dec 2009
- FORMATS: *Int. Conf. on Formal Modeling and Analysis of Timed Systems* (2005, 2007, 2008, 2009, 2012)
- CASES: *Int. Conf. on Compilers, Architectures, and Synthesis for Embedded Systems* (2006)
- ICCP: *Int. Conf. on Intelligent Computer Communication and Processing* (2006)
- ICSOFT: *Int. Conf. on Software and Data Technologies* (2006, 2007)
- ETFA: Emerging Technologies and Factory Automation, 2009
- MEMOCODE: *ACM-IEEE Int. Conf. on Formal Methods and Models of Codesign* (2005)

- ICDCS: *IEEE Int. Conference on Distributed Computer Systems* (1999, 2001, 2003, 2012)
- FORTE: *Formal Techniques for Networked and Distributed Systems* (2002)
- EUC: *IFIP Int. Conference on Embedded and Ubiquitous Computing*, (2007).
- ASP-DAC: *Asia South Pacific Design Automation Conference* (2005)
- ICESS: *Int. Conference on Embedded Software and Systems*. (2004, 2007)
- QSIC: *Int. Conference for Quality Software* (2003, 2004, 2005, 2006)
- *KSEA UKC ICT (Information & Communication Technology) Symposium* (2003, 2006)

### Professional Activities - Workshop Committees

- APRES, 2011, 2014
- ASSURE (1st Int. Workshop on Assurance Cases for Software-intensive Systems), 2013
- Workshop on Open Resilient human-aware Cyber-physical Systems (WORCS), 2013
- SEHC 2012, 2013, 2014
- USENIX HealthSec Workshop (2012, 2013)
- 1st Int. Workshop on Large-Scale Cyber-Physical Systems (LCPS 2011), Dec 12-13, 2011.
- First Workshop on Future Directions in Cyber-physical Systems Security, US DHS, July 22-24, 2009.
- RV: *Workshop on Runtime Verification* (2001, 2002, 2006, 2009) *International Conference on Runtime Verification* (2013, 2014, 2015)
- IEEE International Workshop on Component-Based Design of Resource-Constrained Systems (CORCS 2008, 2009, 2012)
- WCPS: Int. Workshop on Cyber-Physical Systems (2009, 2008)
- WSNHC: *Wireless Sensor Networks for Health Care* (2007)
- HSCC: *Int. Workshop on Hybrid Systems: Computation and Control* (2005)
- JTRES: Workshop on Java Technologies for Real-time and Embedded Systems (2005)
- WORDS: *IEEE Int. Workshop on Object-oriented Real-time Dependable Systems* (1996, 1997, 1999, 2001, 2003, 2005)
- TeleHealth: *1st Int. Workshop on TeleHealth* 2008.
- TPTS: *Workshop on Theory and Practice of Timed Systems* (2002)
- WPDRTS: *Int. Workshop on Parallel and Distributed Real-Time Systems* (2000, 2001, 2002)
- RSP: *IEEE Int. Workshop on Rapid System Prototyping* (2000, 2001)
- *IEEE Int. Workshop on Distributed Real Time Systems* (2000)
- *ARO/NSF Monterey Workshop on Increasing the Practical Impact of Formal Methods for Computer-Aided Software Development* (1998)
- *ACM Workshop on Language, Compiler, and Tool Support for Real-Time Systems* (1995)
- *Formal Tech in Real Time and Fault Tolerant Systems*, Schleswig, Germany (1994)
- *North America Process Algebra Workshop*, Ithaca, NY, Aug 1993.

## Professional Activities - Miscellaneous

- Advisory Member, KOCSEA President Election Board (2009, 2012)
- Organization Committees:
  - Workshop on Software Engineering and Programming Languages (1996)
  - Mini-track Coordinator for Distributed Real-Time Systems, Hawaii Int. Conf. on System Sciences (1996)
  - ARO Workshop on Formal Methods: Automatic Verification* (1993)
  - ARO Workshop on Formal Methods: Real-Time Systems* (1992)
  - ARO Short Courses on *Introduction to Parallel Architectures, Processing and AI Applications* (1986, 1987, 1988)
  - Local arrangements, *8th Int. Symposium on Protocol Specification, Testing, and Verification* (1988)
- NSF Proposal Review Panels
- Award Selection Committee, “Being an Korean-American” essay contest for high school students, Philip Jaisohn Memorial Foundation. (1996-2001)
- Board of Advisors for KASCON VIII (Korean-American Students Conference) Philadelphia, PA (April 1994).
- Ph.D. Program Evaluation Team for Computer Science and System Science Department, State University of NY at Binghamton, Sept 1992.

## Research Interests

- Real-Time Systems, Embedded Systems, Cyber-Physical Systems, Medical Cyber Physical Systems, Formal Methods and Tools, Model-Based Development, Runtime Verification, Assurance Cases, Quantitative Trust Management, Safety and Security of Automotive Systems.

## Courses Taught at the University of Pennsylvania

- CSE 341 – Compilers (Spring 1991, Fall 1991)
- CSE 380 – Introduction to Operating Systems (Spring 1984-1989, Fall 1994, Fall 1996-2000, Fall 2003)
- CSE 400/401 – Senior Design Projects (Fall 2008, Spring 2009, Fall 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014, Spring 2015)
- CIS 441/541 – Embedded Software for Life-Critical Applications (Fall 2010-2015)
- CSE 480 – Distributed and Real-Time Systems: New course designed and developed with the NSF equipment grant, “Teleconferenced Workstations: Improving Experimentation in Undergraduate Education.” (Spring 1994, Spring 1996) Real-Time and Embedded Systems (Fall 2006)
- CIS 505 – Software Systems (Spring 2005-2007)
- CIS 523 – Programming Languages (Fall 1984)
- CIS 541 - Embedded and Cyber Physical Systems (Spring 2010)
- CIS 570 – Operating Systems (Fall 1983)
- CIS 640 – Advanced Topics in Computer Systems: Software Engineering (Spring 1995), Mobile Computing (Spring 1998), E-commerce and E-auction (Spring 2000)



- CIS 640 – Advanced Topics in Software Systems: Software Reliability Methods and Embedded Systems (Fall 2002); Embedded Systems and Sensor Networks (Spring 2004)
- CIS 642 – Seminar in Real-Time Computing (Fall 1989, Fall 1990, Spring 1992, Fall 1993, Fall 1995, Spring 1999, Spring 2001)
- CIS 671 – Advanced Topics in Operating Systems (Spring 1985, Spring 1989)
- CIS 799A – Seminar in Distributed Computing (Fall 1984-1987)
- CIS 800 – Topics in Cyber-Physical Systems (Spring 2012)
- EMTM 553 – Electronic Commerce Systems (Winter 2001, Spring 2001)

#### Courses Taught at the University of Wisconsin-Madison

- CS 302 – Algebraic Language Programming (Fall 1978, Spring 1979)
- CS 536 – Introduction to Programming Languages and Compilers (Spring 1983)
- CS 537 – Introduction to Operating Systems (Summer 1981)

#### Ph.D. Dissertation Supervision

1. David Smitley, *The Utilization of Processors Interconnected with a Reconfigurable Network*, May 1987. (Started as Research Scientist, Supercomputing Research Center, Lanham, Maryland)
2. Amy Zwarico, *An Algebraic Model for Communicating Time-Dependent Processes*, May 1988. (Started as Assistant Professor, Computer Science Department, the Johns Hopkins University, Baltimore, Maryland)
3. Richard Gerber, *Communicating Shared Resources: A Model for Distributed Real-Time Systems*, August 1991. (Started as Assistant Professor, Department of Computer Science, University of Maryland, College Park, Maryland) (Received the Morris and Dorothy Rubinoff Award for the best CIS Ph.D. dissertation, 1992)
4. Victor Wolfe, *Supporting Real-Time Concurrency*, August 1991. (Co-advised with Susan B. Davidson) (Started as Assistant Professor, Department of Computer Science, The University of Rhode Island, Kingston, RI)
5. Robert King, *Design, Implementation and Evaluation of a Real-Time Kernel for Distributed Robotics*, December 1991. (Started as Research Scientist, IBM, Yorktown Heights, NY)
6. Patrice Brémond-Grégoire, *A Process Algebra of Communicating Shared Resources with DenseTime and Priorities*, May 1994. (Continue working at UNYSIS)
7. Hanène Ben-Abdallah, *GCSR: a Graphical Language for the Specification, Refinement and Analysis of Real-Time Systems*, Aug 1996. (Co-advised with Susan B. Davidson) (Started as Postdoc at the University of Waterloo, Professor at U. of Sfax, Tunisia)
8. Duncan Clarke, *Testing Real-Time Constraints*, Dec 1996. (Started as Assistant Professor, Department of Computer Science, The University of Kentucky, Lexington, KY)
9. Inhye Kang, *Real-Time System Analysis based on State-Space Exploration*, May 1997. (Started as Assistant Professor, Department of Computer Science, Soong-Sil University, Korea; Professor, University of Seoul, Korea)
10. Hee Hwan Kwak, *Process Algebraic Approach to the Parametric Analysis of Real-time Scheduling Problems*, Feb 2000. (Started as Senior R&D Engineer II, Synopsys, Portland, OR)

11. Mahesh Viswanathan, *Foundations for the Run-Time Analysis of Software Systems*, Sept 2000. (Co-advised with Sampath Kannan) (Started as Postdoc at DIMACS, Assistant Professor, Department of Computer Science, University of Illinois at Urbana-Champaign) (Received the Morris and Dorothy Rubinoff Award for the best CIS Ph.D. dissertation, 2001)
12. Moonjoo Kim, *Information Extraction. for Run-time Formal Analysis*, Dec 2001. (Co-advised with Sampath Kannan) (Started as Postdoc at POSTECH, Korea; Currently Assistant Professor at KAIST, Korea)
13. Jia Wang, *Loss-Sensitive Decision Rules for Intrusion Detection and Response*, July 2004. (Co-advised with Link Zhao, Statistics Department) (CEO, Venus Info Tech Inc., Beijing, P.R. China)
14. Insik Shin, *A Compositional Framework for Real-time Embedded Systems*, Aug 2006. (Started as Postdoc at Malardalen University, Sweden; Assistant Professor at KAIST, Korea) (Received the Morris and Dorothy Rubinoff Award for the best CIS Ph.D. dissertation, 2006)
15. Usa Sammapun, *Monitoring and Checking of Real-Time and Probabilistic Properties*, May 2007. (Co-advised with Oleg Sokolsky) (Started as IT staff, Goldman Sachs; Kasetsart U., Thailand)
16. Michael May, *Privacy APIs: Formal Models For Analyzing Legal Privacy Requirements*, May 2008. (Co-advised with Carl Gunter) (Development Manager, QIS, Ltd; Radio Adviser Contractor, Partner Communications, Limited; Faculty Lecturer, Kinneret College on the Sea of Galilee)
17. Madhukar Anand, *Conditional Models for Compositional Design of Real-Time Embedded Systems*, May 2008. (Cisco, Data Center Team)
18. Arvind Easwaran, *Advances in Hierarchical Real-Time Systems: Incrementality, Optimality, and Multi-processor Clustering*, Dec 2008. (Co-advised with Oleg Sokolsky) (Postdoc, IPP-HURRAY, Polytechnic Institute of Porto) (Research Scientist, Honeywell) (Assistant Professor, NTU, Singapore)
19. Nikhil Dinesh, *Regulatory Conformance: Logic and Logical Form*, Dec 2010. (Co-advised with Aravind Joshi) (Researcher, SRI)
20. Jian Chang, *Behavior-Centric Trust Management in Distributed Systems*, May 2013. (Co-supervised with Sampath Kannan) ([www.openx.com](http://www.openx.com))
21. Andrew G. West, *Damage Detection and Mitigation in Open Collaboration Applications*, May 2013. (Co-supervised with Oleg Sokolsky) (Verisign)
22. Zhuoyao Zhang, *Performance Modeling and Resource Management for MapReduce Applications*, May 2014. (Co-supervised with Boon Tau Loo) (Google)
23. BaekGyu Kim, *Safety-Assured Model-Based Development of Real-Time Embedded Software for the GPCA Infusion Pump*, August 2015. (Co-supervised with Oleg Sokolsky) (Toyota ITC)

### Master's Thesis Supervision

1. David M. Leonard, *Deterministic Multiple Processor Task Scheduling*, Dec. 1985.
2. Osvaldo M. Yasuda, *Remote Predicate Invocation in Prolog*, May 1987.
3. Robert King, *Design and Implementation of a Real-Time Distributed Kernel*, August 1987.
4. Hanene Ben-Abdallah, *Design and Implementation of UDP/IP for Timix*, May 1991.
5. Jisook Youn, *Methodology and Techniques for the Translation of SDL to ACSR*, May 1997.

6. Yoshihito Takashima, Towards Time and Value Determinism in Real-Time System with Virtual Machine, August 2006. (Co-advised with Sebastian Fischmeister)
7. Santosh G. Vattam, *Medical Device Dongle: An Open Source Standards-based Platform for Interoperable Medical Device Connectivity*, May 2012.
8. Cong Liao, *A Trust-Based Crowd-Sourcing Model for Information Evaluation in Vehicular Networks*, May 2013.
9. Meng Xu, *Overhead-Aware Compositional Scheduling Analysis of Real-Time Systems*, May 2013. (Co-advised with Linh Thi Xuan Phan)

### Senior Project Supervision

- Class of 1984 - Ned Batchelder, Michael S. Dusche, Elizabeth P. Gazouleas, Abigail Schweber
- Class of 1985 - Jerrol Davis, James C. Fu, Peter Go, Susanna Scala, Alan Waxman
- Class of 1986 - JoAnn Chang, Gaylord Holder, Shiu Kee Mok, Shin Ngai, John Rozario, Quang Tan, Khanh Tran
- Class of 1987 - Andrew Gideon, Vadim Mzhen
- Class of 1988 - Sung-Ho Ahn, Terence Lim
- Class of 1990 - Lalit Das, Manu Gambhir, Ronald Levinson
- Class of 1992 - Lawrence Katzman, Kok-Hoon Teo
- Class of 1995 - Ferit Albukrek, Alexander Gizis, Vicky Wei-Jen Lai, Ioi Kim Lam, Garrett Schade, John H. Seung
- Class of 1997 - Earl Grant-Lawrence Eugenia Ho, Chiram Littleton, David Robinson, Mike Selhorn, Adam Tarshis
- Class of 1998 - Sameer Merchant, Jeff Robertson, M. Ross, Andre Sung
- Class of 1999 - Charles Go
- Class of 2000 - Yuriko Horvath, Marvin Kawabata, Andrew Kim, David Kim, Cole Parker, Mike Rosenthal, Joel Susal (The senior design project by Kawabata, Susal, Parker, and Rosenthal placed the 1st in the SEAS senior design competition.)
- Class of 2001 - Eric R Brueggemann, Daniel Chang, Dan Fleisher, Munenari Fukuda, Ethan D Gur-Esh, Jason W Heckathorn, Jisen Ho, Jay A Kalyanaraman, Alex Koo, Jonathan Liang, Sudeep Mathur, Christopher Ngan, Kevin O'Brien, Usa Sammapun, John A. Sinclair, Kavitha Shastry, Sam M. Sokolovsky, Robert Spier, Raymond Wong, Daniel A. Wu
- Class of 2003 - Jennifer R. Gau, Fei Jin, Uri Korn, Litton Chen (EE), Dan Keeley (EE), Jonathan Ha (EE), Sangyop Lee (EE)
- Class of 2004 - Yongjoon P. Lee, Khurram Taji
- Class of 2005 - Yoshihito Takashima, Mike Benoit (EE), Mike Swavola (EE)
- Class of 2010 - Ana Rosa Giannareas, Vanessa Kern, Nicholas Stevens, Adrian Viesca-Trevino (ESE) (Their senior design project on "Smart Alarms" placed the 1st in the SEAS senior design competition. This team is called NAVA.)

- Class of 2011 - Avantika Agrawal, Phillip Baker, Brittney Exline
- Class of 2013 - Benjamin Perez, Chris Feo; Preetam D'Souza, Max Guo, David Wang
- Class of 2014 - Mingzhe Lin, Deepthi Shashidhar

#### **Selected External Habilitation and Ph.D. Committees**

- External Committee Member, PhD Dissertation by Sisu Xi, Computer Science and Engineering, "Real-Time Virtualization and Cloud Computing," Washington University, St. Louis, Aug 2014.
- External Examiner, Ph.D. Dissertation by Silviu Craciunas, Department of Computer Sciences, "Programmable Temporal Isolation for High-Performance and Real-Time Systems," University of Salzburg, Austria, July 2010.
- External Examiner, Ph.D. Dissertation in Computing and Software by Xia Yong Hu, "Proving Implementability of Timing Properties with Tolerances," McMaster University, Canada, Aug 11, 2008.
- Opponent, Ph.D. Dissertation by Daniel Sundmark, "Structural System-Level Testing of Embedded Real-Time System", Maalardalen University, Sweden, Feb 15, 2008.
- Kerncommissie of Ph.D. Dissertation by Pieter Jan Laurens Cuijpers "Hybrid Process Algebra," Technische Universiteit Eindhoven, Dec 9, 2004.
- Jury Member of Habilitation Thesis by Sergio Yovine, "Models, Algorithms, and Logics for the Analysis of Real-time and Hybrid Systems (Modèles, Algorithmes et Logiciels pour L'Analyse de Systèmes Temporisés et Hybrides)," University of Joseph Fourier, Grenoble, France, September 2001.
- Committee member of Ph.D. Dissertation by Gregor Goessler, "Compositional Modeling of Real-time Systems - Theory and Practice," University of Joseph Fourier, Grenoble, France, September 2001.

#### **Postdoctoral Fellows and Research Associates**

1. Dr. Jin-Young Choi, Postdoc (1993-1995) (Professor, Korea University)
2. Dr. Anna Philippou, Postdoc (Mar 1997 - Aug 1998) (Assistant Professor, University of Cyprus)
3. Dr. Oleg Sokolsky, Research Associate (Sep 1998 - June 2001)
4. Dr. Jitka Stribrna, Postdoc (Sep 2000 - Aug 2001)
5. Dr. Hyoung Seok Hong, Postdoc (Sep 2000 - Feb 2002), Research Associate. (Mar 2003 - Feb 2004)
6. Dr. Na Young Lee, Postdoc (Nov 2001 - Oct 2002)
7. Dr. Martin Leucker, Postdoc (Jan 2002 - Mar 2002)
8. Dr. Jesung Kim, Postdoc/Research Associate (April 2002 - Sep 2005) (Research Scientist, Matworks)
9. Dr. Li Tan, Postdoc (July 2002 - Dec 2003) (Research Scientist, Matworks; Assistant Professor, Washington State University Tri-Cities)
10. Dr. Sebastian Fischmeister, Research Associate, (Feb 2005 - Jan 2008) (Assistant Professor, University of Waterloo)
11. Dr. Vinayak Prabhu, Postdoc (July 2008 - Aug 2009)
12. Linh Thi Xuan Phan, Postdoc (March 2009 - June 2012) (Research Assistant Professor, University of Pennsylvania)

13. Dr. Eunkyong Jee, Postdoc (Sept 2009 - Jan 2011) (Research Assistant Professor, KAIST)
14. Dr. Krishna Venkatasubramanian (Sept 2009 - Aug 2012) (Assistant Professor, Worcester Polytechnic Institute)
15. Dr. Anaheed Zaki (March 2011 - Dec 2013) (Research Scientist, Matworks)
16. Dr. Miroslav Pajic (Sept 2012 - June 2015) (Assistant Professor, Duke)
17. Dr. Nicola Bezzo (Nov 2012 - present) (Assistant Professor, UVA, Jan 2016)
18. Dr. James Weimer (Nov 2012 - present)
19. Dr. Lu Feng (James S. McDonnell Fellow, April 2013 - present)
20. Dr. Deepak Gangadharan (March 2015 - present)

### Visiting Fellows

- Prof. Jin-Taek Choi, Department of Computer Science, Incheon University, Incheon, Korea (1993)
- Prof. Soonyong Seong, Department of Computer Engineering, Pusan University of Foreign Studies, Pusan, Korea (1995)
- Prof. Youngho Kim, Computer Science Department, Communication & Architecture Laboratory, Pusan National University, Pusan, Korea (1995)
- Dr. Young Si Kim, Software Engineering Department, ETRI (Electronics and Telecommunications Research Institute), Taejon, Korea (1995 - 1996)
- Dr. Vijay Gehlot, Visiting Postdoc (1995-1996)
- Prof. Soon Ju Kang, School of EECS, Kyungpook National University, Deague, Korea (May 2000 - May 2002, Feb 2007 - Feb 2008)
- Prof. Jin-Young Choi, Department of Computer Science and Engineering, Korea University, Seoul, Korea (Sep 2002 - Aug 2003, Aug 2009 - Aug 2010)
- Prof. Moon-kun Lee, Department of Computer Science, Chon-buk National University, Chon-buk, Chon-ju City, Korea. (Jan 2003 - May 2004)
- Prof. Chang Byung-Mo, Department of Computer Science, Sookmyung Women's University, Seoul, Korea (Mar 2003 - Aug 2003)
- Prof. Myuhng-Joo Kim, Department of Information Security Engineering, Seoul Women's University, Seoul, Korea (Mar 2003 - Feb 2004)
- Prof. NakUn Seong, Department of Computer Science, Kyungsung University, Busan, Korea (Mar 2004 - Feb 2005)
- Prof. Hyeokman Kim, Department of Computer Science, Kookmin University, Seoul, Korea (Jan 2005 - Dec 2005)
- Prof. Woojin Lee, School of EECS, Kyungpook National University, Deague, Korea (Jan 2005 - Dec 2005)
- Dr. Jang Yeol Kim, KAERI (Korea Atomic Energy Research Institute), Korea (Sept 2007-Aug 2008)
- Prof. Yoon Joon Lee, Department of Computer Science, KAIST, Korea (Sept 2007-Feb 2008)

- Dr. Jeong Nyeo Kim, ETRI, Korea (Feb 2009 - Feb 2010)
- Yun Kyung Park, ETRI, Korea (June 2009 - June 2010)
- Prof. Young Woong Ko, Department of Computer Engineering, Hallym University, Chuncheon, Korea (July 2009 - July 2010)
- Prof. Myuhng-Joo Kim, Department of Information Security Engineering, Seoul Women's University, Seoul, Korea (Aug 2010 - July 2011)
- Dr. Poalo Masci, Queen Mary University of London (Oct 2012 - Nov 2012)
- Jeonghwan Ryu, Visiting Student, Korea University (Sep 2012 - Jan 2013)
- Dr. Chang Joon Park, ETRI, Korea (Aug 2012 - July 2013)
- Kieu My Phan, Visiting Student, KAIST, Korea (Sept 2013 - Feb 2015)
- Dr. Liang Cheng, Institute of Software, Chinese Academy of Sciences, Beijing, China (Jan 2014 - Dec 2015)
- Dr. Hyon Young Choi, Korea University (April 2014 - March 2016)

#### **Selected SEAS and CIS Activities**

- CIS Lecturers' Mentoring Committee (since 2014)
- CIS Diversity Hiring Committee (2012-2013)
- SEAS Pender Award Committee (2012-present)
- Senate Committee on Faculty and the Administration (SCOA) member (2011-2012)
- SEAS Faculty Council (2008-2010)
- SEAS Faculty Personnel Committee (2000-2001, 2005-2007)
- SEAS Search Committee for ESE Chair (2002-2004)
- CSE Undergraduate Curriculum Revision/Evaluation Committee (2002-2003, 2010-present)
- SEAS Committee on Intellectual Properties (2001)
- CIS Building Committee (1998-2000)
- CIS Undergraduate Curriculum Chair (1994-1997)
- Secretary of the SEAS Faculty (1993-1994)
- SEAS Staff Recognition Award Committee (1993-1994)
- CIS Faculty Recruiting Committee (1993-1994, Chair 1998-1999, 1999-2001, Chair 2002-2003, 2005, 2006)
- CIS WPE (Written Preliminary Exam) Committee (1984-1985, 1987-1988, Chair 1988, 1991-1992, 1992-2000, 2005-2007); WPE Revision Committee (1990-1991, 1993)
- Founding Faculty Advisor of the CSE Dining Philosophers (1989-1992) (Dining Philosophers were named after the famous concurrency problem with the same name taught in CSE 380 operating systems course.)

- Faculty Advisor of Student ACM Chapter (1984-1986, 1989-1992)
- Editor-in-Chief, CIS Newsletter (1991-1992)
- SEAS Search Committee for the Professorial Chair in Telecommunications (Jan 1986-Jan 1988)
- Department Colloquium Chair (1985-1986, 1991)
- Secretary of CIS Department (1985)
- Member of the SEAS Network Task Group (1984-1985)

#### **Technology Transfer - Consultant to Small Business Grants**

- STTR Phase I, Progressive Model Generation for Adaptive Resilient System Software, Gramma Tech, Inc., Ithaca, NY, Oleg Sokolsky (PI), Insup Lee, July 2013-Jan 2014.
- STTR Phase I and II, “Simulation and Analysis Toolset for an Industry Standard Embedded System Specification Language,” Fremont Associates, LLC, Camden, South Carolina. Sep 2004-Jun 2005, Sep 2005-Sep 2007.
- SBIR Phase I and II, “Software Tools for Formal Specification and Verification of Distributed Real-Time Systems,” CCCC (Computer Command and Control Company), Philadelphia, 1993-1996.

#### **Selected Invited Talks and Lectures since 2001**

- Towards a Logical Foundation for Assurance Arguments for Plug & Play Systems, Invited talk, VeriSure: Verification and Assurance Workshop, San Francisco, July 18, 2015.
- Medical Cyber-Physical Systems for 21st Century Health Care, Keynote talk, KSEA NRC & KASBP Spring Symposium, Edison, NJ, June 12, 2015.
- Attack-Resilient State Estimator and Sensor Fusion for CPS Security, Invited talk, Korea University, June 9, 2015.
- Medical Application Platforms for On-Demand Medical Cyber-Physical Systems, Int. Workshop on CPS, DGIST, June 3, 2015.
- Medication Application Platforms for On-Demand Medical Cyber-Physical Systems Keynote Talk, APRES Workshop, April 13, 2015
- Compositional Scheduling and Real-Time Virtualization, Keynote Talk, Summer Embedded Technology Summit, Jeju, Korea, July 11, 2014.
- Closing the Loop in Medical Cyber-Physical Systems: Safety Challenges, Distinguished Lecture, International Workshop on Cyber-Physical Systems, Seoul, July 9, 2014.
- Assurance Cases for Life-Critical Cyber-Physical Systems, Tutorial, International Workshop on Cyber-Physical Systems, Seoul, July 8, 2014.
- Closing the Loop in Medical Cyber-Physical Systems: Safety Challenges, Invited talk, Dr. M Project, KAIST, July 4, 2014.
- Assuring the Safety of Closed-Loop Medical Systems, Keynote Talk, 2nd Smart Medical Information and Security Conference, Seoul, July 1, 2014.
- Model-Based Development of Embedded Systems, Invited Seminar, Industrial Technology Institute, Samsung Electronics, Korea, June 30, 2014.

- Assuring the Safety, Security, and Reliability of Medical Cyber-Physical Systems (MCPS), Neurosurgery Grand Rounds, SoM/UPHS, Philadelphia, March 27, 2014
- Assurance Cases for Medical Devices, Keynote talk, Secure Software Research Center (SSRC) Workshop, Seoul, Nov 22, 2013.
- Assuring the Safety and Security of Medical Cyber-Physical Systems, Plenary talk, Secure Software Research Center (SSRC) Opening Day, Korea University, Nov 19, 2013.
- Compositional Schedulability Analysis and Real-Time Virtualization, Invited Talk, Symposium on Computer and Information Science, KSEA UKC2013, East Rutherford, NJ, Aug 9-10, 2013.
- Challenges, Opportunities and Research Directions of Medical Cyber-Physical Systems, Universal Linkage for Top Research Advisor Program (ULTRA) Forum, Aug 9, 2013.
- “Assuring the Safety of Medical Cyber-Physical Systems (MCPS),” Keynote talk, CSOS R&D Workshop, Kyungpook National University, Daegu, Korea, July 19, 2013.
- “Assuring the Safety, Security, and Reliability of Medical Cyber-Physical Systems,” Computer Science Distinguished Lecturer Series, Wayne State University, March 26, 2013.
- “Assuring the Safety, Security, and Reliability of Medical-Device Cyber-Physical Systems (MDCPS),” Triangle Computer Science Distinguished Lecturer Series, Feb 25, 2013.
- Invited Lecture, “Challenges and Research Directions in Medical Cyber-Physical Systems,” Nano-Tera/ARTIST Summers School on Embedded Systems Design 2012 Aix les Bains, France, September 21, 2012
- Keynote talk, “Challenges and Research Directions in Medical Cyber-Physical Systems,” Workshop on Cyber-Physical Systems, DGIST at Tague, Aug 23, 2012.
- Keynote talk, “Challenges and Research Directions in Medical Cyber-Physical Systems,” Workshop on Cyber-Physical Systems, Networks, and Applications (CPSNA), Seoul, Aug 19, 2012.
- Invited talk, “Assurance cases for Generic PCA reference implementation and beyond.” IFIP Working Group 10.4 (Dependable Computing and Fault Tolerance), June 28-July 1, 2012.
- Keynote Talk, “Challenges in Medical-Device Cyber-Physical Systems,” Workshop on Open Resilient human-aware Cyber-Physical Systems (WORCS-2012), June 25, 2012
- Distinguished Lecture, “Challenges and Research Directions in Medical Cyber-Physical Systems,” DTC Science and Technology Innovators Series, University of Minnesota, May 1, 2012.
- Tutorial, “Compositional Analysis of Cyber-Physical Systems,” Linh T.X. Phan, Insup Lee, Oleg Sokolsky, Insik Shin, CPS Week, April 16, 2012.
- FKII (The Federation of Korean Information Industries) mini-course, “Embedded Software for Life-Critical Application,” Seoul, Feb 6-10, 2012.
- Keynote talk, “Challenges and Research Directions in Medical Cyber Physical Systems,” KOCSEA Symposium, San Jose, Dec 17, 2011.
- Tutorial, “Compositional Analysis of Real-Time Embedded Systems”, Linh T.X. Phan, Insup Lee, Oleg Sokolsky, Embedded Systems Week, Taipei, Oct 9, 2011.
- Invited talk, “Medical Cyber-Physical Systems,” 1st EU-US Workshop on Networked Monitoring & Control/CPS, Brussels, Belgium, June 28, 2011.



- Plenary talk, “Cyber Physical Systems: 21st Century Embedded Systems,” ISET 2011, Jeju, South Korea, to be give on May 20, 2011.
- Keynote talk, “Compositional scheduling and analysis techniques for real-time embedded systems,” CPS Day @DGIST, Deagu, South Korea, to be given on May 19, 2011.
- Distinguished Lecture, “Medical Cyber Physical Systems,” Department of Computer Science, Washington University, Dec 10, 2010.
- Keynote talk, “Cyber Physical Systems: The Next Computing Revolution,” ACACES International Summer School, La Mola, Spain, July 11, 2010. (<http://www.hipeac.net/summerschool/>)
- “Medical Cyber Physical Systems,” Special Session on CPS, DAC 2010, June 17, 2010.
- Keynote talk, “Cyber Physical Systems,” Cornerstone Ceremony, ADREAM, LAAS-CNRS, Toulouse, France, June 15, 2010. (<http://www.laas.fr/ADREAM>)
- “Real-Time Challenges and Opportunities in HCMDSS,” RTSS 09 Banquet talk, Dec 2, 2009.
- “High-Confidence Medical Device Systems and Healthcare Systems,” Inter. Workshop on Cyber-Physical Systems (WCPS’09): Closing the Loop, in Conjunction with ESWeek 2009, Oct 16, 2009.
- “Cyber Physical Systems: The Next Computing Revolution,” SNU, Korea, Sept 1, 2009.
- “Cyber Physical Systems: The Next Computing Revolution,” KAIST, Korea, Aug 31, 2009.
- “Cyber Physical Systems: The Next Computing Revolution,” Keynote Talk, UCK IST, Raleigh, July 18, 2009.
- Invited Panelist in NITRD Strategic Forum, Federal Strategic Plan for the Networking and Information Technology Research and Development Program, DC, Feb 24-26, 2009. (webcast at <http://www.tvworldwide.com/events/nitrd/090225/>)
- “Compositional Schedulability Analysis,” McGill University, Oct 3, 2008.
- “Cyber Physical Systems: The Next Computing Revolution,” KIST (Korea Institute of Science and Technology), Korea, June 16, 2008.
- “High-Confidence Automotive Cyber Physical Systems and Related Research at Penn,” Hyundai Autonet, Korea, June 10, 2008.
- “Cyber Physical Systems and Related Research at Penn,” Invited Talk, ETRI, Korea, June 9, 2008.
- “Compositional Schedulability Analysis and Cyber Physical Systems,” Kyungpook National University, Korea, June 5, 2008.
- “High-Confidence Medical Device Software and Systems: Trends, Challenges, and Opportunities,” Invited Technical Talk, 10th Software Design for Medical Devices, Philadelphia, PA, May 15, 2008.
- “Compositional Schedulability Analysis,” Keynote talk, ITRC Meeting, Jeju Island, April 10, 2008.
- “Compositional Schedulability Analysis and Cyber Physical Systems,” KAIST, Korea, April 7, 2008.
- “Cyber Physical Systems: The Next Computing Revolution,” Sunmoon University, Korea, March 18, 2008.
- “Compositional Schedulability Analysis: Challenges, Techniques, and Open Problems,” Maalardalen University, Sweden, Feb 15, 2008.

- “Network and Information Technology R&D in US,” Department of Information and Communication of Korea, Nov 20, 2007.
- “Compositional Analysis Techniques for Real-Time Embedded Systems,” SNU, Nov 19, 2007.
- “CPS: Cyber Physical Systems,” Keynote talk, Workshop on Embedded Software in Non-IT Industry Seoul, Korea November 16, 2007
- “High Confidence Medical-Device Software and Systems (HCMDSS): A CPS Application Domain,” NSF Symposium on Cyber-Enabled Discovery and Innovation, RPI, Troy, NY, Sep 6, 2007.
- “Compositional Techniques for Real-Time Embedded Systems,” Keynote Talk, UKC 2007, Aug 2007.
- “Model-Based Techniques for Validating Implementations,” Drexel University, Jan 25, 2007.
- “Opportunities and Challenges of Cyber Physical Systems (CPS), KOCSEA Workshop, Dec 2006.
- “High Confidence Software and Systems: A Software Perspective,” PCAST NIT Subcommittee Meeting, Aug 30, 2006.
- “Model-Based Techniques for Validating Implementations,” IEEE Montreal Chapter, McGill University, May 11, 2006.
- “Model-based Techniques for Real-Time Embedded Systems,” KAIST, April 27, 2006.
- “Model-Based Techniques for Validating Implementations,” Princeton University, April 14, 2006.
- “Model-Based Techniques for Validating Implementations,” University of Alabama-Birmingham, March 8, 2006.
- “Model-based Development of Embedded Software,” IEEE North Jersey Computer Chapter, Aug 2, 2005.
- “Ubiquitous Realization: Challenges and Opportunities for Embedded Systems,” Samsung SDS Thought Leadership Conference 2005, Keynote talk, April 13, 2005.
- “Run-time verification and its application to IDS,” Invited talk, Mini Symposium on Information Security, Northeastern University, Nov 9, 2004.
- “Compositional Periodic Interface for Real-Time Components,” Invited talk, Workshop on Software Engineering Tools: Compatibility and Integration, The Monterey Workshop Series, Vienna, Oct 4-6, 2004.
- “Bridging the Gap between Specification and Implementation,” Kunkook University, Korea, July 13, 2004.
- “Model-based Development of Embedded Software,” EECS, Kyungpook National University, Korea, July 8, 2004.
- Moderator, Panel on “Major Push Needed in Distributed Real-Time Computing Research,” ISORC, Vienna, May 14, 2004.
- “A Compositional Framework for Real-Time Guarantees,” Future Generation Software Architectures in the Automotive Domain: Connected Services in Mobile Networks, Workshop, San Diego, Jan 10-12, 2004.
- “Model-Based Techniques for Validating Implementations at Run Time and Design Time,” Drexel University, Nov 12, 2003.

- “Checking Conformance to Component Interface Specification,” Next TTA Workshop, Philadelphia, Oct 2003
- “Formal Methods for Schedulability and Performance Analysis of Real-Time and Embedded Systems,” one-day lecture at European Summer School on Embedded Systems 2003 in Vaseras, Oct 3, 2003.
- Panelist, “Future Challenges and Advances in Real-Time Computing,” RTAS, D.C., June, 2003.
- “Formal Methods for CARA Development,” FDA, Nov 2002.
- Panelist, Next TTA Workshop, Grenoble, Oct, 2002.
- “Model-Based Validation of Software,” New Information Technology Age: The KSEA North-East Workshop & Special Event (NEWS 2002), Ocean City, MD, May 3-5, 2002.
- “Specification-Based Techniques for Validating Programs at Run Time and Design Time,” Villanova University, April 22, 2002.
- Half-day tutorial on “Formal Methods for Timing and Schedlability Analysis of Embedded Systems,” during ETAP '02, Grenoble, France, April 2002.
- “Formal Methods for CARA Development,” WRAIR, Nov 2001.
- “Run-time Monitoring and Checking of Java Programs,” ETRI, Aug 2001
- “A Family of Resource-Bound Real-time Process Algebras,” KAIST, Aug 2001
- “A Family of Resource-Bound Real-time Process Algebras,” Invited talk, *FORTE '01 (Formal Techniques for Networked and Distributed Systems)*, Cheju, Korea, Aug 28-31, 2001.

## Journals

1. J. Weimer, R. Ivanov, A. Roederer, S. Chen, and I. Lee. Parameter invariant design of medical alarms. *IEEE Design & Test* (To appear, accepted June 2015)
2. Cache-Aware Compositional Analysis of Real-Time Multicore Virtualization Platforms, M. Xu, L.T.X. Phan, O. Sokolsky, S. Xi, C. Lu, C. Gill, I. Lee, *Real-Time Systems* (To appear, Accepted March 2015)
3. Patient Infusion Pattern based Access Control Schemes for Wireless Insulin Pump System. Xiali Hei, Xiaojiang Du, Shan Lin, Insup Lee, Oleg Sokolksy. *IEEE Trans on Parallel and Distributed Systems*, Volume: PP, Issue: 99, Nov. 2014, pp: 1-14.
4. Safety-critical Medical Device Development using the UPP2SF Model Translation Tool, Miroslav Pajic, Zhihao Jiang, Insup Lee, Oleg Sokolsky, Rahul Mangharam, to appear in *ACM TECS* 2014. (Accepted Sept 2013).
5. Formal Synthesis of Application and Platform Behaviors of Embedded Software Systems, Jinhyun Kim, Inhye Kang, Jin-Young Choi, Insup Lee and Sugwon Kang, *Software & Systems Modeling*, Springer-Verlag, 2013. (available online, May 1, 2013)
6. Model-Driven Safety Analysis of Closed-Loop Medical Systems, M. Pajic, R. Mangharam, O. Sokolsky, D. Arney, J. Goldman and I. Lee, *IEEE Transactions on Industrial Informatics*, 10(1), Jan 2014, pages 3-16.
7. AS-CRED: Reputation and Alert Service for Inter-domain Routing. Jian Chang, Krishna K. Venkatasubramanian, Andrew G. West, Sampath Kannan, Insup Lee, Boon Thau Loo, and Oleg Sokolsky. *IEEE Systems Journal*, Special Issue on Security and Privacy in Complex Systems, 7(3): 396-409, Sept 2013.

8. Analyzing and Defending Against Web-based Malware. Jian Chang, Krishna K. Venkatasubramanian, Andrew G. West, Insup Lee. *ACM Computing Survey*, 45(4): 49:1-49:35, August 2013.
9. "A Comparison of Compositional Schedulability Analysis Techniques for Hierarchical Real-time Systems," Madhukar Anand, Sebastian Fischmeister, Insup Lee, *ACM TECS*, 13(1): 2:1-2:37, 2013.
10. State-based Scheduling with Tree Schedules: Analysis and Evaluation, Madhukar Anand, Sebastian Fischmeister, Insup Lee, Linh T.X. Phan, *Real-Time Systems*, 48(4): 430-462, 2012.
11. Challenges and Research Directions in Medical Cyber-Physical Systems, Insup Lee, Oleg Sokolsky, San-jian Chen, John Hatchiff, Eunkyong Jee, BaekGyu Kim, Andrew King, Margaret Mullen-Fortino, Soojin Park, Alexander Roederer, and Krishna Venkatasubramanian, in *Special Issue on Cyber-Physical Systems*, *IEEE Proceedings*, Jan 2012. (Invited paper)
12. Special Issue on Cyber-Physical Systems [Scanning the Issue]. Radha Poovendran, Krishna Sampigethaya, Sandeep K. S. Gupta, Insup Lee, K. Venkatesh Prasad, David Corman, James L. Paunicka, *Proceedings of the IEEE* 100(1), pages 6-12, Jan 2012.
13. Introduction to the special section on runtime verification. Oleg Sokolsky, Klaus Havelund, Insup Lee. *STTT* 14(3), pages 243-247, 2012
14. "PADS: An approach to modeling resource demand and supply for the formal analysis of hierarchical scheduling," Anna Philippou, Insup Lee, and Oleg Sokolsky, *Theoretical Computer Science*, Volume 413, Issue 1, 2012, pp. 2-20.
15. "Limitations of Threshold-Based Brain Oxygen Monitoring for Seizure Detection," Soojin Park M.D., Alexander Roederer, Ram Mani M.D., Sarah Schmitt M.D., Peter LeRoux M.D., Lyle Ungar Ph.D., Insup Lee Ph.D., Scott Kasner M.D. *NEUROCRITICAL CARE: Volume 15, Issue 3 (2011)*, Page 469-476.
16. "Zero-Laxity based Real-Time Multiprocessor Scheduling," Jinkyu Lee, Arvind Easwaran, Insik Shin, Insup Lee, *Journal of Systems and Software* 84 (12), 2011, pp. 2324-2333.
17. "Trust in Collaborative Web Applications," Andrew West, Jian Chang, Krishna Venkatasubramanian, Insup Lee. *Future Generation Computer Systems*, 28(8), Feb 2011. pp. 1238-1251.
18. "Permission to Speak: A Logic for Access Control and Conformance," Nikhil Dinesh, Aravind Joshi, Insup Lee, Oleg Sokolsky, *JLAP (Journal of Logic and Algebraic Programming)* 80(1) 2011. p. 50 74
19. "UML Behavior Models of Real-time Embedded Software for Model-Driven Architecture," Jin Hyun Kim, Jin-Young Choi, Inhye Kang, Insup Lee, *Special Issue on Foundations and Practices of UML, J. UCS (Journal of Universal Computer Science)*, 16 (17), 2010.
20. "Timed and Resource-oriented Statecharts for Embedded Software," Jin Hyun Kim, Inhye Kang, Jin-Young Choi, Insup Lee, *IEEE Transactions on Industrial Informatics*, Vol 6, No 4, Nov 2010. pp. 568-578.
21. "Generating Reliable Code from Hybrid Systems Models", M. Anand, S. Fischmeister, Y. Hur, J. Kim, I. Lee, *IEEE Transactions on Computers*, Vol 59, No 9, Sep 2010. pp. 1281-1294.
22. "Model Checking of Real-Time Properties of Resource-Bound Process Algebra," Junkil Park, Jungjae Lee, Jin-Young Choi, Insup Lee, *IEICE Transactions on Fundamentals of Electronics Communications and Computer Sciences*. Vol. E92-A, No.11,Nov. 2009.
23. "Plug-and-Play for Medical Devices: Experiences from a Case Study," David Arney Sebastian Fischmeister, Julian M. Goldman, Insup Lee, Robert Trausmuth, *Biomedical Instrumentation & Technology*, 2009. pp. 313-317.

24. “Hardware Acceleration for Conditional State-based Communication Scheduling On Real-Time Ethernet”, Sebastian Fischmeister, Robert Trausmuth, Insup Lee, *IEEE Transactions on Industrial Informatics*, Vol 5, No 3, Aug 2009.
25. “Optimal Virtual Cluster-based Multiprocessor Scheduling,” Arvind Easwaran, Insik Shin, and Insup Lee, *Real-Time Systems*, Vol 43, No 1, 2009. pp. 25-59. (Special edition for ECRTS 2008)
26. “Dynamic Trust Management,” Matt Blaze, Sampath Kannan, Insup Lee, Oleg Sokolsky, Jonathan Smith, Angelos D. Keromytis, and Wenke Lee, *IEEE Computer*, vol 42, no 2, Feb 2009, pp. 44-52.
27. “Compositional Real-Time Scheduling Framework with Periodic Model,” Insik Shin and Insup Lee, *ACM TECS*, vol 7, no 3, April 2008. pp. 30:1-39
28. “A Design Framework for Real-Time Embedded Systems with Code Size and Energy Constraints,” Insik Shin, Sheayun Lee, Woonseok Kim, Insup Lee, Sang L. Min, *ACM TECS*, vol 7, no 2, Feb 2008. pp. 18:1-27 pages
29. “Network-Code Machine: Programmable Real-Time Communication Schedules ,” Sebastian Fischmeister, Oleg Sokolsky, Insup Lee, *IEEE Trans. on Computers*, Nov 2007, pp. 1505-1519.
30. “Resources in Process Algebra,” Insup Lee, Anna Philippou, Oleg Sokolsky, *JLAP (Journal of Logic and Algebraic Programming*, 72, 2007, pp. 98-122.
31. “High-Confidence Medical Device Software and Systems,” Insup Lee, George Pappas, Rance Cleaveland, John Hatcliff, Bruce Krogh, Peter Lee, Harvey Rubin, Lui Sha, *IEEE Computer*, vol 39, no 4, April 2006. pp. 33-38.
32. “Compositional Modeling and Refinement for Hierarchical Hybrid Systems,” Rajeev Alur, Radu Grosu, Insup Lee, Oleg Sokolsky, *JLAP (Journal of Logic and Algebraic Programming)* special issue on Hybrid Systems, Vol. 68, pp. 105–128, March 2006.
33. “Opportunities and Obligations for Physical Computing Systems,” Jack Stankovic, Insup Lee, Al Mok, Raj Rajkumar, *IEEE Computer*, vol 38, no 11, Nov 2005, pp. 23-31.
34. “Formal Specifications and Analysis of the Computer Assisted Resuscitation Algorithm (CARA) Infusion Pump Control System,” Rajeev Alur, David Arney, Elsa L. Gunter, Insup Lee, Jaime Lee, Wonhong Nam, Frederick Pearce, Steve Van Albert, Jam Jiaxiang Zhou, *Int. Journal in Software Tools for Technology Transfer (STTC)*, vol 4, 2004. (Special Issue on CARA)
35. “Java-MaC: a Rigorous Run-time Assurance Tool for Java Programs,” M. Kim, S. Kannan, I. Lee, O. Sokolsky, M. Viswanathan, *Formal Methods in Systems Design*, vol 24 (2), March 2004.
36. “Hierarchical Modeling and Analysis of Embedded Systems,” Rajeev Alur, Thao Dang, Joel Esposito, Yerang Hur, Franjo Ivančić, Vijay Kumar, Insup Lee, Pradyumna Mishra, George Pappas, and Oleg Sokolsky, *Proceedings of the IEEE*, vol 91, no 1, January 2003. (Special Issue on Hybrid Systems.)
37. R. Fierro, A. Das, J. Spletzer, Y. Hur, R. Alur, J. Esposito, G. Grudic, V. Kumar, I. Lee, J. P. Ostrowski, G. Pappas, J. Southall and C. J. Taylor, “A Framework and Architecture for Multirobot Coordination,” *International Journal of Robotics Research*, vol 21, no 10-11, 2002, pp. 977-995.
38. “Process Algebraic Modeling and Analysis of Power-Aware Real-Time Systems,” Insup Lee, Anna Philippou, and Oleg Sokolsky, *IEEE Computing and Control Engineering Journal*, vol 13, no 4, 2002, pp. 180-188.
39. “Parametric Approach to the Specification and Analysis of Real-time Scheduling based on ACSR-VP,” Hee-Hwan Kwak, Insup Lee, Oleg Sokolsky, *Science of Computer Programming*, Vol. 42, No. 1, 2002, pp. 49-60.

40. "Distributed web-based simulation experiments for optimization," Enver Yücesan, Yuh-Chuyn Luo, Chun-Hung Chen and Insup Lee, *Simulation Practice and Theory* 9 (2001) pp. 73-90.
41. "Hiding Resources that Can Fail," A. Philippou, O. Sokolsky, I. Lee, R. Cleaveland, and S.A. Smolka, *Information Processing Letters*, Volume 80, Issue 1, Oct 2001.
42. "Verisim: Formal Analysis of Network Simulations," K. Bhargavan, C.A. Gunter, M. Kim, I. Lee, D. Obradovic, O. Sokolsky, and M. Viswanathan, *IEEE Transactions on Software Engineering*, Vol. 28, No. 2, Feb 2002, pp. 129-145. (Special Issue on Selected Papers from Int. Symp. on Software Testing and Analysis, 2000.)
43. "Specification and Analysis of Real-Time Systems with PARAGON," Oleg Sokolsky, Insup Lee, and Hanène Ben-Abdallah, *Annals of Software Engineering*, 7, 1999, pp. 211-234.
44. "A Graphical Language for Specifying and Analyzing Real-Time Systems," Hanène Ben-Abdallah and Insup Lee, Special Issue of *Integrated Computer-Aided Engineering* on Real-time Engineering Systems, Vol 5, No 4, 1998, pp. 279-301.
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#### **Invited Conference, Magazine, and Workshop Papers**

63. Towards Assurance Cases for Resilient Control Systems, James Weimer and Oleg Sokolsky and Nicola Bezzo and Insup Lee, 2nd Conference on Cyber-Physical Systems, Networks, and Applications (CP-SNA), Hong Kong, Oct 2014.
64. Distributed Aspects of the Artificial Pancreas, Stephen D. Patek, Sanjian Chen, Patrick Keith-Hynes, Insup Lee, 51st Annual Allerton Conf. on Communication, Control and Computing, 2013.
65. “Assuring the Safety of On-Demand Medical Cyber-Physical Systems,” Andrew King, Lu Feng, Oleg Sokolsky, Insup Lee, 1st Conference on Cyber-Physical Systems, Networks, and Applications (CPSNA), Taipei, Aug 19-21, 2013.
66. “Security and Interoperable-Medical-Device Systems, Part 2,” Eugene Y. Vasserman, Krishna K. Venkatasubramanian, Oleg Sokolsky, and Insup Lee, *IEEE Security & Privacy*, 10(6), pp 70–73, Nov-Dec 2012.
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68. Rationale and Architecture Principles for Medical Application Platforms, John Hatcliff, Andrew King, Insup Lee, Alasdair MacDonald, Anura Fernando, Michael Robkin, Eugene Vasserman, Sandy Weininger and Julian Goldman, ICCPS, CPSWeek, April 2012.
69. “Challenges in the Regulatory Approval of Medical Cyber-Physical Systems,” Oleg Sokolsky, Insup Lee, and Mats Heimdahl, Special session on software certification, EMSOFT, ESWeek, Oct 2011.
70. “Towards a Compositional Multi-Modal Framework for Adaptive Cyber-Physical Systems,” Linh T. X. Phan and Insup Lee. Proceedings of the 1st Workshop on Cyber-Physical Systems, Networks, and Applications, Toyama, Japan, Aug. 2011.
71. “Assurance Cases in Model-Driven Development of the Pacemaker Software,” Eunyoung Jee, Insup Lee and Oleg Sokolsky, 4th Int. Symposium On Leveraging Application of Formal Methods, Verification and Validation (ISoLA), Part II, LNCS 6416, pp 343-356, Amirandes, Heraclion, Crete, October 18-20, 2010. (Track on Certification of Software-Driven Medical Devices)

72. "Medical Cyber Physical Systems," Insup Lee and Oleg Sokolsky, CPS Demystified Session, 47th Design Automation Conference (DAC), June 17, 2010.
73. "Cyber Physical Systems: The Next Computing Revolution," Raj Rajkumar, Insup Lee, Lui Sha, and Jack Stankovic, CPS Demystified Session, 47th Design Automation Conference (DAC), June 17, 2010.
74. "Simulation Relations, Interface Complexity, and Resource Optimality for Real-Time Hierarchical Systems," Insup Lee, Arvind Easwaran, Madhukar Anand, Linh Phan, and Oleg Sokolsky, Workshop on REconciling Performance with Predictability (RePP), Oct 15, 2009.
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104. “A Real-Time Kernel for Distributed Multi-Robot Systems,” Insup Lee, Robert King and Xiaoping Yun, *Proc. American Control Conference*, Atlanta, GA, pp. 1083 - 1088, June 15-17, 1988.

### Refereed Conference Proceedings

105. Attack-Resilient State Estimation in the Presence of Noise, Miroslav Pajic, Paulo Tabuada, Insup Lee, George J. Pappas, Conference on Decision and Control (CDC), Osaka, Dec 15-18, 2015. (to appear)
106. Platform-Specific Code Generation from Platform-Independent Timed Models, BaekGyu Kim, Lu Feng, Oleg Sokolsky and Insup Lee, IEEE RTSS, Dec 2015 (to appear)
107. A Data-Driven Behavior Modeling and Analysis Framework for Diabetic Patients. Sanjian Chen, Lu Feng, Michael Rickels, Amy Peleckis, Oleg Sokolsky and Insup Lee. IEEE Int. Conf. on Healthcare Informatics (ICHI), Oct 21-23, 2015. (to appear)
108. An Intraoperative Glucose Control Benchmark for Formal Verification. Sanjian Chen, Matthew O’Kelly, James Weimer, Oleg Sokolsky, Insup Lee. ADHS (IFAC Conf. on Analysis and Design of Hybrid Systems), Oct 14-16, 2015. (to appear)
109. Automatic Verification of Linear Controller Software. Miroslav Pajic, Junkil Park, Insup Lee, George J. Pappas and Oleg Sokolsky. ACM EMSOFT, Oct 2015. (to appear)
110. Robust Estimation Using Context-Aware Filtering, Radoslav Ivanov\*, Nikolay Asenov Atanasov, Miroslav Pajic, George Pappas, Insup Lee, Annual Allerton Conference on Communication, Control, and Computing, Oct 2015. (to appear)
111. Hierarchical Multi-Formalism Proofs for Cyber Physical Systems. Michael Whalen, Sanjai Rayadurgam, Elaheh Ghassabani, Anitha Murugesan, Oleg Sokolsky, Mats Heimdahl and Insup Lee. ACM-IEEE MEMOCODE, Sept 2015.
112. Towards Assurance for Plug & Play Medical Systems, Andrew L. King, Lu Feng, Sam Procter, Sanjian Chen, Oleg Sokolsky, John Hatcliff, Insup Lee, SAFECOMP, Sept 2015.
113. Requirement Engineering for Functional Alarm System for Interoperable Medical Devices. Krishna K. Venkatasubramanian, Eugene Y. Vasserman, Vasiliki Sfyrla, Oleg Sokolsky, and Insup Lee. SAFECOMP, Sept 2015.
114. A Hybrid Approach to Causality Analysis, Shaohui Wang,, Yoann Geoffroy, Gregor Gssler, Oleg Sokolsky, and Insup Lee, RV, Sept 2015.
115. Robust Monitoring of Hypovolemia in Intensive Care Patients Using Photoplethysmogram Signals, Alexander Roederer, James Weimer, Joseph DiMartino, Jacob Gutsche, Insup Lee, IEEE EMBC, Milano, Italy, August 25-29, 2015. (Selected for oral presentation)
116. Rapid Co-design of Electro-mechanical Specifications for Robotic Systems, Nicola Bezzo, Matthew Piccoli, Peter Gebhard, Vijay Kumar, Mark Yim, Insup Lee, ASME DETC, Aug 2015.

117. RT-OpenStack: CPU Resource Management for Real-Time Cloud Computing. S. Xi, C. Li, C. Lu, C. Gill, M. Xu, L. T. X. Phan, I. Lee, and O. Sokolsky. IEEE International Conference on Cloud Computing (CLOUD), New York, NY, June 2015.
118. Verified ROS-Based Deployment of Platform-Independent Control Systems, Wenrui Meng, Junkil Park, Oleg Sokolsky, Stephanie Weirich and Insup Lee, NFM 2015, May 2015.
119. Quantitative Schedulability Analysis of Continuous Probability Tasks in a Hierarchical Context. J. Boudjadar, A. David, J. H. Kim, K. G. Larsen, M. Mikucionis, U. Nyman, A. Skou, I. Lee, and L. T. X. Phan. ACM SIGSOFT Symposium on Component-Based Software Engineering (CBSE), Montreal, Canada, May 2015.
120. Early detection of critical pulmonary shunts in infants, R. Ivanov, J. Weimer, A. Simpao, M. Rehman and I. Lee, ACM/IEEE Int. Conf. Cyber-Physical Systems (ICCPS), April 2015, pp. 110-119. (Best Paper Runner-Up)
121. Sensor attack detection in the presence of transient faults, J. Park, R. Ivanov, J. Weimer, M. Pajic, and I. Lee, ACM/IEEE Int. Conf. Cyber-Physical Systems (ICCPS), April 2015.
122. Flexible Framework for Statistical Schedulability Analysis of Probabilistic Sporadic Tasks. J. Boudjadar, A. David, J. H. Kim, K. G. Larsen, M. Mikucionis, U. Nyman, A. Skou, I. Lee, and L. T. X. Phan. IEEE International Symposium on Object/Component/Service-Oriented Real-Time Distributed Computing (ISORC), Auckland, New Zealand, April 2015.
123. Platform-Dependent Timing Verification Framework in Model-Based Implementation. B. Kim, L. Feng, L. T. X. Phan, O. Sokolsky, and I. Lee. Design Automation and Test in Europe (DATE) Conference, Grenoble, France, Mar. 2015.
124. Fluid Model-based Mixed-Criticality Scheduling on Multiprocessors, Jaewoo Lee, Kieu-My Phan, Xiaozhe Gu, Jiyeon Lee, Arvind Easwaran, Insik Shin and Insup Lee, IEEE RTSS, Dec 2014. (Best Paper runner-up)
125. Real-Time Multi-Core Virtual Machine Scheduling in Xen, Sisu Xi, Meng Xu, Chenyang Lu, Linh Phan, Christopher Gill, Oleg Sokolsky and Insup Lee, ACM EMSOFT, Oct 2014.
126. Attack Resilient State Estimation for Autonomous Robotic Systems, Nicola Bezzo, James Weimer, Miroslav Pajic, Oleg Sokolsky, George J. Pappas, Insup Lee, IEEE/RSJ International Conference on Intelligent Robots and Systems (iROS), Sept 14-18, 2014.
127. From Requirements to Code: Model Based Development of a Medical Cyber Physical System, Anitha Murugesan, Michael Whalen, Sanjai Rayadurgam, John Komp, Lian Duan, Mats Heimdahl, Baek-Gyu Kim, Oleg Sokolsky and Insup Lee, FHIES/SEHC, July 17-18, Washington, D.C., 2014.
128. Reasoning About Confidence and Uncertainty in Assurance Cases: A Survey, Lian Duan, Mats Heimdahl, Sanjai Rayadurgam, Anaheed Ayoub, Oleg Sokolsky and Insup Lee, FHIES/SEHC, July 17-18, Washington, D.C., 2014.
129. A Framework for the Rapid Specification, Design, and Fabrication of Printable Robots, Ankur Mehta, Nicola Bezzo, Byoungkwon An, Peter Gebhard, Vijay Kumar, Insup Lee, and Daniela Rus, International Symposium on Experimental Robotics (ISER), Marrakesh/Essaouira, Morocco, June 15-18, 2014.
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132. Robustness of Attack-resilient State Estimators, Miroslav Pajic, James Weimer, Nicola Bezzo, Paulo Tabuada, Oleg Sokolsky, Insup Lee and George J. Pappas, ICCPS, April 2014, Berlin. (Best Paper Award)
133. Linking abstract analysis to concrete design: A hierarchical approach to verify medical CPS safety, Anitha Murugesan, Oleg Sokolsky, Sanjai Rayadurgam, Michael Whalen, Mats Heimdahl and Insup Lee, ICCPS, April 2014, Berlin.
134. Resilient Multidimensional Sensor Fusion Using Measurement History. Radoslav Ivanov, Miroslav Pajic and Insup Lee, HiCoNS 2014, April 2014, Berlin.
135. Attack-Resilient Sensor Fusion, Radoslav Ivanov, Miroslav Pajic and Insup Lee, DATE 2014, Dresden, 24-28 March, 2014.
136. A Layered Approach for Testing Timing in the Model-Based Implementation, BaekGyu Kim, Hyeon I Hwang, Taejoon Park, Sang H. Son, Insup Lee, Design, Automation & Test in Europe (DATE 2014).
137. Functional Alarms for Systems of Interoperable Medical Devices, Krishna K. Venkatasubramanian, Eugene Y. Vasserman, Oleg Sokolsky, Insup Lee, IEEE Int. Symposium on High Assurance Systems Engineering (HASE), Jan 2014. (Extended Abstract, 2 pages)
138. Cache-Aware Compositional Analysis of Real-Time Multicore Virtualization Platforms, Meng Xu, Linh T.X. Phan, Insup Lee, Oleg Sokolsky, Sisu Xi, Chenyang Lu, and Christopher Gill. IEEE Real-Time Systems Symposium (RTSS), Dec 2013. (Best Paper runner-up)
139. Platform-Dependent Code Generation for Embedded Real-Time Software, BaekGyu Kim, Linh T.X. Phan, Insup Lee and Oleg Sokolsky, CASES 2013, Oct 2013.
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141. Model-based development of the Generic PCA infusion pump user interface prototype in PVS, Paolo Masci, Anaheed Ayoub, Paul Curzon, Insup Lee, Oleg Sokolsky, Harold Thimbleby, SafeComp 2013.
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143. A Model Specification Approach for On-Demand Medical Systems, A.L. King, L. Feng, O. Sokolsky, I. Lee, Int Symposium on Foundations of Health Information Engineering and Systems (FHIES), Aug 2013.
144. TrustForge: Flexible Access Control for Collaborative Crowd-Sourced Environment, Jian Chang, Peter Gebhard, Andreas Haeberlen, Zack Ives, Insup Lee, Oleg Sokolsky and Krishna K. Venkatasubramanian, Privacy Security Trust (PST 2013), July 10-12, 2013.
145. Verification of interactive software for medical devices: PCA infusion pumps and FDA regulation as an example, Paolo Masci, Paul Curzon, Michael D. Harrison, Anaheed Ayoub, Insup Lee, Harold Thimbleby, ACM EICS (Engineering Interactive Computing Systems), June 24-27, 2013, City University London, UK. (Honorable Mention Award, Best Paper Runner-up)
146. A Trust Model for Vehicular Network-Based Incident Reports, Cong Liao, Jian Chen, Krishna Venkatasubramanian, Insup Lee, IEEE Symposium on Wireless Vehicular Communications: WiVeC, 2-3 June 2013, Dresden, Germany.

147. Contract-based Blame Assignment by Trace Analysis, Shaohui Wang, Anaheed Ayoub, Radoslav Ivanov, Oleg Sokolsky and Insup Lee, ACM HiCoNS, April 2013.
148. Overhead-Aware Compositional Analysis of Real-Time Systems, Linh T.X. Phan, Meng Xu, Jaewoo Lee, Insup Lee, and Oleg Sokolsky, IEEE RTAS, April 2013.
149. Improving Schedulability of Fixed-Priority Real-Time Systems using Shapers, Linh T.X. Phan and Insup Lee, IEEE RTAS, April 2013.
150. Co-design of Control and Platform with Dropped Signals, Damoon Soudbakhsh, Linh T.X. Phan, Oleg Sokolsky, Insup Lee, and Anuradha Annaswamy, ACM/IEEE ICCPS, April 2013.
151. PIPAC: Patient Infusion Pattern based Access Control Scheme for Wireless Insulin Pump System, Xiali Hei, Xiaojiang Du, Shan Lin, and Insup Lee, IEEE INFOCOM, 25-30 March 2013.
152. Assessing the Overall Sufficiency of Safety Arguments, Anaheed Ayoub, Jian Chang, Oleg Sokolsky and Insup Lee, 21st Safety-critical Systems Symposium (SSS'13), Bristol, United Kingdom, February 5-7, 2013.
153. Extending Task-level to Job-level Fixed Priority Assignment and Schedulability Analysis Using Pseudo-deadlines. Hoon Sung Chwa, Hyoungbu Back, Sanjian Chen, Jinkyu Lee, Arvind Easwaran, Insik Shin and Insup Lee. IEEE RTSS, Dec 2012. (Best paper award)
154. A Model-Based I/O Interface Synthesis Framework for the Cross-Platform Software-Model. Baekgyu Kim, Linh T.X. Phan, Insup Lee and Oleg Sokolsky. RSP'2012, Oct 2012.
155. A Systematic Approach to Justifying Sufficient Confidence in Software Safety Arguments. Anaheed Ayoub, Baekgyu Kim, Oleg Sokolsky and Insup Lee. SAFECOMP, Sep 2012.
156. Evaluation of a Smart Alarm for Intensive Care using Clinical Data. Andrew King, Kelsea Fortino, Nicholas Stevens, Shah Sachin, Margaret Fortino-Mullen, Insup Lee. 34th Annual International IEEE EMBS Conference, Aug 29-Sep 1, 2012.
157. Towards Content-driven Reputation for Collaborative Code Repositories. Andrew G. West and Insup Lee. In WikiSym '12: Proceedings of the Eighth International Symposium on Wikis and Open Collaboration, pp. 13:1-13:4, Linz, Austria. August 2012.
158. A Safety Case Pattern for Model-Based Development Approach. Anaheed Ayoub, Baek-Gyu Kim, Insup Lee and Oleg Sokolsky. NASA Formal Methods Symposium (NFM), Norfolk, VA, April 2012. (Short Paper)
159. "HMM-Based Characterization of Channel Behavior for Networked Control Systems," Jian Chang, Krishna K. Venkatasubramanian, Chinwendu Enyioha, Shreyas Sundaram, George Pappas, and Insup Lee, Conference on High Confidence Networked Systems (HiCoNS), CPSWeek, April 2012.
160. Realizing Compositional Scheduling through Virtualization, Jaewoo Lee, Sisu Xi, Sanjian Chen, Linh T.X. Phan, Chris Gill, Insup Lee, Chenyang Lu, and Oleg Sokolsky, IEEE RTAS, April 2012.
161. From Verification to Implementation by Model Translation and a Pacemaker Case Study, Miroslav Pajic, Zhihao Jiang, Insup Lee, Oleg Sokolsky and Rahul Mangharam, IEEE RTAS, April 2012. (Best Student Paper Award)
162. "Smart Alarms: Multivariate Medical Alarm Integration for post CABG surgery patients." Stevens Nicholas, Giannareas Ana, Kern Vanessa, Viesca Adrian, Fortino-Mullen Margaret, King Andrew, Lee Insup. ACM SIGHT International Health Informatics Symposium (IHI 2012), Miami, FL, Jan 28-30, 2012.

163. The Medical Device Dongle: An OpenSource StandardsBased Platform for Interoperable Medical Device Connectivity. Philip Asare, Danyang Cong, Santosh Vattam, Baek-Gyu Kim, Shan Lin, Oleg Sokolsky, Margaret Mullen-Fortino and Insup Lee. ACM SIGHT International Health Informatics Symposium (IHI 2012). Jan, 2012. (5 page, short Paper)
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166. "Autonomous Link Spam Detection in Purely Collaborative Environments," Andrew G. West, Avantika Agrawal, Phillip Baker, Brittney Exline, and Insup Lee, WikiSym 2011, Mountain View, Oct 3-5, 2011.
167. "Multilingual Vandalism Detection using Language-Independent & Ex Post Facto Evidence," Andrew G. West and Insup Lee. In PAN-CLEF 11: Notebook Papers on Uncovering Plagiarism, Authorship, and Social Software Misuse, Amsterdam. Sept. 2011.
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