

WONHONG NAM

CURRICULUM VITAE

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| RESEARCH INTERESTS | <ul style="list-style-type: none">• Formal Verification: Model Checking, Temporal Logics, and BDDs.• Theory: Algorithms, Computational Complexity, Automata, Logics.• Software Analysis: Static Analysis, Interface Synthesis.• Web Services: Automated Composition and Verification.• Automated Planning and Controller Synthesis. | |
| EDUCATION | Doctor of Philosophy in Computer and Information Science University of Pennsylvania, Philadelphia, PA, USA. Advisor: Prof. Rajeev Alur Thesis: Synthesis and Compositional Verification Using Language Learning | Sep 2001–May 2007 |
| | Master of Science in Computer Science and Engineering Korea University, Seoul, Republic of Korea. Advisor: Prof. Jinyoung Choi Thesis: Formal Verification and Testing of RACE Protocol and CCA Board Using SMV | Sep 1998–Aug 2001 |
| | Bachelor of Science in Computer Science and Engineering Korea University, Seoul, Republic of Korea. Military Service, Korea Army (Apr 1996–Sep 1997) | Mar 1992–Aug 1998 |
| RESEARCH, TEACHING AND WORK EXPERIENCE | Associate Professor, Konkuk University Seoul, Korea | Mar 2014–present |
| | Assistant Professor, Konkuk University Seoul, Korea | Mar 2010–Feb 2014 |
| | Post-Doctoral Research Fellow, Pennsylvania State University University Park, PA, USA Supervisor: Prof. Dongwon Lee | Jan 2007–Dec 2009 |
| | Internship, Cadence Design Systems New Providence, NJ, USA. Supervisor: Dr. Robert P. Kurshan | Jun 2005–Aug 2005 |
| AWARDS AND HONORS | <ul style="list-style-type: none">• Scholarship, University of Pennsylvania, USA, Sep 2001 – Jan 2007, approx. \$50,000/year.• Best paper award, Cadence Technical Conference (CTC'06), USA, 2006.• National Scholarship, The Ministry of Information and Communication, Republic of Korea, 2001–2005, \$60,000. | |

PUBLICATIONS Publications are available online at <http://konkuk.ac.kr/~wnam>.

- JOURNAL ARTICLES**
- [1] **Wonhong Nam**, Reeseo Cha, Hyunyoung Kil. **Optimal Algorithm for Internet-of-Things Service Composition Based on Response Time**. *International Journal of Web and Grid Services*, Forthcoming. SCI-E. IF=1.615.
 - [2] Hyunyoung Kil, Reeseo Cha, **Wonhong Nam**. **Transaction History-based Web Service Composition for Uncertain QoS**. *International Journal of Web and Grid Services*, Vol.12(1):42–62. 2016. SCI-E. IF=0.757.
 - [3] Seonmo Kim, **Wonhong Nam**, Hyunyoung Kil, Myunghwan Park. **Formal Verification of Gravity-induced Loss of Consciousness Monitoring System for Aircraft**. *Computing in Science & Engineering*, Vol. 16(5):96–103, Sep/Oct 2014. SCIE, IF=1.729.
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 - [9] **Wonhong Nam**, Hyunyoung Kil, Dongwon Lee. **On the Computational Complexity of Behavioral Description-Based Web Service Composition**. *Theoretical Computer Science*. Vol. 412(48):6736–6749. Nov 11, 2011. SCI, IF=0.665.
 - [10] **Wonhong Nam**, Rajeev Alur. **Active Learning of Plans for Safety and Reachability Goals with Partial Observability**. *IEEE Transactions on Systems, Man, and Cybernetics—Part B: Cybernetics*. Vol. 40(2):412–420, April 2010. SCI, IF=3.080.
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 - [12] **Wonhong Nam**, P. Madhusudan, Rajeev Alur. **Automatic Symbolic Compositional Verification by Learning Assumptions**. *Formal Methods in System Design (FMSD)*, Vol. 32(3):207–234, Jun. 2008. SCI-E, IF=0.690.
 - [13] Rajeev Alur, P. Madhusudan, **Wonhong Nam**. **Symbolic Computational Techniques for Solving Games**. *International Journal on Software Tools and Technology Transfer (STTT)*, Vol. 7(2):118–128, April 2005.
 - [14] Rajeev Alur, David Arney, Elsa L. Gunter, Insup Lee, Jaime Lee, **Wonhong Nam**, Frederick Pearce, Steve Van Albert, Jiaxiang Zhou. **Formal Specifications and Analysis of the Computer-Assisted Resuscitation Algorithm (CARA) Infusion Pump Control System**, *International Journal on Software Tools and Technology Transfer (STTT)*, Vol.5(4):308–319, May 2004.

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- [15] Hyunyoung Kil, **Wonhong Nam**. **Semantic Web Service Composition Using Formal Verification Techniques**. In *The 2012 International Conference on u- and e- Service, Science and Technology*, CCIS Vol. 352, page 72–79, Dec 16–19, 2012. Kangwon, Korea.
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- [17] Reeseo Cha, **Wonhong Nam**, Jin-Young Choi. **Reliable Integration of Exact and Approximated Arithmetic with Three-Valued Logic in Python**. In *The 1st International Conference on Software Technology*, page 104–109, May 29–31, 2012. Cebu, Philippines.
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- [19] Myoungjin Kim, Hanku Lee, **Wonhong Nam**. **A Model of Multi-agent Design for Virtualization Resource Configuration in Cloud Computing**. In *International Conference on Computers, Networks, Systems and Industrial Engineering*, page 234–239, May 23–25, 2011. Jeju, Korea.
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- [21] Jungjae Lee, Reeseo Cha, Younghun Han, **Wonhong Nam**, Jin-young Choi, Won-Tae Kim, Seung-Min Park. **Modeling Cyber-Physical Systems Using Hybrid System Framework: A Case Study**. In *The 2nd International Conference on Research Challenges in Computer Science (ICR-CCS 2010)*, December 18–19, 2010. China.
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- [25] Hyunyoung Kil, **Wonhong Nam**, Dongwon Lee. **Automatic Web Service Composition with Abstraction and Refinement**. In *the 18th International World Wide Web Conference (WWW'09 poster)*, page 1121–1122, Apr 20–24, 2009. Madrid, Spain. Acceptance Rate: 31% (60/192).
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- [30] X. Du, A. Kuehlmann, R. P. Kurshan, K. L. McMillan, **W. Nam**. **Formal Verification of Industrial Benchmarks Using Flexible Engine Architecture**. In *Cadence Technical Conference (CTC'06)*, May 8–10, 2006. USA. **The best paper award**.
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- RESEARCH PROJECT**
- [1] National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT and Future Planning. **Formal Verification of Heisenbugs for Multi-threaded Programs**. 06/2013–05/2016.
- [2] Faculty Research Fund of Konkuk University. **Formal Verification of Pilot Monitoring Software for Aircraft Safety**. 05/2012–04/2013.
- [3] Republic of Korea Air Force. **Formal Verification of Aircraft Safety System Algorithm**. 04/2011–02/2012.
- [4] ITRC, NIPA-2010-C1090-1001-0008. **Developing Cloud Platform and its Services for Social Media Service**. 06/2010–12/2015.
- [5] Faculty Research Fund of Konkuk University. **Efficient Web Service Composition System**. 04/2010–03/2011.

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