

# Jae young Bang

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Citizen of Republic of Korea

## Objective

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- Doctor of Philosophy in Computer Science
- Summer software engineering internship position

## Research Interests

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- Collaborative modeling and development of software systems
- Large and complex software-intensive systems design and architecture
- Distributed computing systems and grid computing (cloud computing)
- Internet (web technologies and applications) and mobile computing

## Education

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University of Southern California: ..... Los Angeles, CA, USA  
5/2014 **PhD** in Computer Science (Expected)

Advisor: Prof. Nenad Medvidovic

University of Southern California: ..... Los Angeles, CA, USA  
5/2010 **Master of Science** in Computer Science

Advisor: Prof. Nenad Medvidovic

Soongsil University: ..... Seoul, Republic of Korea  
6/2008 **Bachelor of Engineering** in Computer Science (GPA: 3.66/4.50)

## Project Experience

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### Funded

University of Southern California: ..... Los Angeles, CA, USA  
6/2009 – present **CoDesign/CoWare**: A highly extensible, scalable, and event-based collaborative software modeling framework that provides real-time model synchronization, inconsistency checking and conflict detection and resolution via extensible plug-ins.

Funded by Infosys Technologies Ltd.

Project website: <http://softarch.usc.edu/~ronia/codesign>

## Research

- University of Southern California: ..... Los Angeles, CA, USA  
3/2009 – 11/2009 **Smart Redundancy:** Novel redundancy technique for distributed computation. Deployed modified BOINC on PlanetLab.
- 7/2009 – 9/2009 **rMapReduce:** A programming model and software framework that extends the MapReduce paradigm to gracefully and efficiently tolerate a wide class of failures, including hard-to-detect failures caused by faulty and malicious nodes. Deployed modified Hadoop on PlanetLab.
- 1/2009 – 3/2009 **Mahjong on PlanetLab:** Deployed Mahjong, by Dr. Yuriy Brun, on PlanetLab, as a Directed Research student under the supervision of Prof. Nenad Medvidovic at University of Southern California, Los Angeles, CA, USA

## Professional

- Uniwebs Corporation:..... Seoul, Republic of Korea  
3/2008 – 7/2008 **Syda:** Multimedia itinerary player for WIPI-based cellular phones
- 1/2008 – 3/2008 **Uniwebs Admin:** A web-based CRM application of Uniwebs Corp.

## Other

- University of Southern California: ..... Los Angeles, CA, USA  
8/2008 – 5/2009 **Theatre Script Online Database:** Web-based theater script archive for Los Angeles area theaters. Applied Incremental Commitment Model.
- Soongsil University: ..... Seoul, Republic of Korea  
3/2008 – 7/2008 **U:Desk.net:** Web app market. Received the gold prize from Soongsil Univ. Software Contest 2008. Written in Ruby.
- 10/2006 – 7/2007 **U:Desk:** A software commerce broker service over the Internet
- 3/2006 – 10/2006 **Network Accessed Sound Solution (NASS):** Audio resource sharing system over the Internet
- 10/2004 – 9/2005 **Min-dl-le (Dandelion):** An instant messenger with high quality video
- 9/2003 – 11/2003 **Decentralized P2P for Small Networks:** A P2P software system aiming networks that consist of small number of clients

## Employment History

- University of Southern California: ..... Los Angeles, CA, USA  
5/2009 – 5/2010 **Student Worker:** Research Assistant
- Uniwebs Corporation: ..... Seoul, Republic of Korea  
1/2008 – 7/2008 **Software Developer**
- International Conference Service Korea: ..... Seoul, Republic of Korea  
6/2006 – 7/2006 **Website Developer**
- Backshin Academy: ..... Seoul, Republic of Korea  
3/2003 – 7/2003 **Instructor:** Computational Algorithms

Myungmoon Academy: ..... Seoul, Republic of Korea  
1/2003 – 3/2003 **Instructor:** Computational Algorithms

IM4U: ..... Seoul, Republic of Korea  
12/2002 – 1/2003 **Instructor:** Computational Algorithms

## **Publications**

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### **Conference Publications**

1. Yuriy Brun, George Edwards, Jae young Bang, and Nenad Medvidovic. “Smart Redundancy for Distributed Computation.” *In proceedings of the 31st International Conference on Distributed Computing Systems (ICDCS11)*, Minneapolis, MN, June 2011.
2. Jae young Bang, Daniel Popescu, George Edwards, Nenad Medvidovic, Naveen Kulkarni, Girish M. Rama, and Srinivas Padmanabhuni. “CoDesign – A Highly Extensible Collaborative Software Modeling Framework.” *In proceedings of the Research Demonstration Track at the 32nd International Conference on Software Engineering (ICSE10)*, Cape Town, South Africa, May 2010.

### **Non-refereed Publications**

1. Yuriy Brun, George Edwards, Jae young Bang, and Nenad Medvidovic. “Online Reliability Improvement via Smart Redundancy in Systems with Faulty and Untrusted Participants.” Technical Report USC-CSSE-2009-510, Center for Software Engineering, University of Southern California, 2009.

## **Formal Presentations**

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1. Fast Conflict Detection for Remote Collaborative Software Modeling. University of Southern California Center of Systems and Software Engineering Annual Research Review 2011, Los Angeles, CA, March 8th, 2011.
2. CoDesign – A Highly Extensible Collaborative Software Modeling Framework. The 32<sup>nd</sup> International Conference on Software Engineering (ICSE10), Cape Town, South Africa, May 5th, 2010.
3. CoDesign – A Highly Extensible Collaborative Software Modeling Framework. University of Southern California Center of Systems and Software Engineering Annual Research Review 2010, Los Angeles, CA, March 9th, 2010.
4. CoDesign/CoWare: A Highly Extensible and Scalable Collaborative Software Modeling Infrastructure. *Infosys Aurora 09'*. Los Angeles, CA, October 19th, 2009.

## **Technical Experties**

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Natural language: English (fluent), Korean (native)

Programming: C/C++ (MFC), Java (Swing, Web Start, SE, ME, WIPI, Servlet),  
PHP, Ruby (on Rails), HTML (standard compliance), CSS,  
Javascript (AJAX)

Platforms: Mac, Windows, Linux

## **Honors, Awards, Fellowships**

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8/2010 – 8/2014 USC Annenberg Graduate Fellowship  
9/2007 Academic Honor Scholarship, Soongsil University  
3/2007 Academic Honor Scholarship, Soongsil University  
9/2006 Academic Honor Scholarship, Soongsil University  
9/2003 Academic Honor Scholarship, Soongsil University

## **Society Memberships**

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07/2007 – present IEEE Student Member  
10/2008 – present IEEE Computer Society Member  
11/2010 – present ACM Student Member  
11/2010 – present ACM SIGSOFT Member