

## **JONGWOOK WOO**

**Assistant Professor, PhD**

**+1-323-343-2916 (O)**

**+1-323-343-5209 (F)**

**Computer Information Systems Department**

**Simpson Tower, Room 604**

**School of Business**

**California State University, Los Angeles**

**Los Angeles, CA 90032-8530**

[jwoo5@calstatela.edu](mailto:jwoo5@calstatela.edu)

[jongwook@alumni.usc.edu](mailto:jongwook@alumni.usc.edu)

<http://www.calstatela.edu/faculty/jwoo5>

### **Research Interests**

- **E-Business**
  - N-tier Architecture (Client/Server with Middleware and Data Base)
  - Web Application/Development
  - WAP Application (Mobile computing)
  - Data Mining
  - Component Model
  - Load-Balancing and Fault-Tolerant Computing
  - Security, DRM (Data Rights Management)
  - BPM (Business Project Management) and its tool
  - Web Service
- **Parallel and Distributed Computing**
  - Static Analysis in Java/Object-Oriented Language for Parallel/Distributed Computing
  - Parallel Algorithm and High-Performance Computing in Image Detection, 2D/3D Graphics Application, Collaborative Work
  - Parallel/Distributed Computing in Java (J2EE) /Object-Oriented Language
  - Cluster Computing
- **Network Communications**
  - Load Sharing on BGP Mechanism of Multihoming in IPv6
- **Programming Language (Java, C++, C# .Net, Visual Basic 6 (.Net), XML (VoiceXML, WML)**
- **Bioinformatics based on the knowledge of other interests**

### **Affiliations**

- **Executive Director, SoftZen Inc. (March 2002 – Present)**
  - <http://www.softzen.co.kr>

- **Technical Advisor, Core Trust Inc. (March 2002 – Present)**
  - <http://www.coretrust.com>
- **Author of The Technical News Brief, Korea Institute of Science and Technology Information (May 2002 – Present)**
  - <http://www.kisti.re.kr/>

## Experience

- **Assistant Professor, Computer Information Systems Dept., School of Business, California State University, Los Angeles, USA (Sept. 2003 - present)**
  - CIS510 Information Systems Project Management (<http://instructional1.calstatela.edu/jwoo5/classes/fall2003/cis510>), Fall 2003
  - CIS486 Information Systems Architecture (<http://instructional1.calstatela.edu/jwoo5/classes/fall2003/cis486>), Fall 2003
  - CIS457 Advanced Java Programming (<http://instructional1.calstatela.edu/jwoo5/classes/fall2003/cis457/>), Fall 2003
- **Full Time Lecturer, Computer Information Systems Dept., School of Business, California State University, Los Angeles, USA (Sept. 2002 – Sept 2003)**
  - CIS283 Introduction to Application Programming (C++) (<http://instructional1.calstatela.edu/jwoo5/classes/spr2003/cis283/>), Spring 2003
  - CIS454 Server Site Web Development for E-Business in J2EE and .NET (<http://instructional1.calstatela.edu/jwoo5/classes/spr2003/cis454/>), Spring 2003
  - CIS283 Introduction to Application Programming (C++) (<http://ceng.usc.edu/~jowoo/classes/cis283/>), Winter 2003
  - CIS461 Web Development I (<http://ceng.usc.edu/~jowoo/classes/cis461/>), Winter 2003
  - CIS405A Analysis and Logical Design (Database) (<http://ceng.usc.edu/~jowoo/classes/cis405A/>), Winter 2003
  - CIS455 Visual Basic Programming (<http://ceng.usc.edu/~jowoo/classes/cis455/>), 3 Sections, Fall 2002
- **Research Professor, Yonsei University, Seoul, Korea (March 2002 – Sept. 2002)**
  - Investigating Load-Sharing and Redundancy for BGP mechanism in IPv6 for multihoming architecture
  - Investigating E-Business applications in Clustering Computing on N-Tier Architecture with J2EE and WAP (WML, XML)
  - Load-Balancing Algorithm for dynamic loads on N-Tier Architecture
  - **Committee** of KTCGF (Korea Technology Credit Guarantee Fund)
  - Consulting several companies by designing and developing N-tier E-Business/M-Commerce applications with UML, J2EE (Servlet, JSP, JavaBeans, EJB), XML, WML, html, JavaScript, ActiveX, and JDBC on *Jrun3.0*, *Jboss/Tomcat*, *Oracle8i* and *MySql*.
    - <http://photo.nate.com>
    - <http://www.kise.go.kr>
- **Consultant, LA, CA (Aug 2001 – Feb 2002)**

- Consulting several companies by designing and developing N-tier E-Business applications with UML, J2EE (Servlet, JSP, JavaBeans, EJB), html, JavaScript, and JDBC on *Jboss, Tomcat, and MySql*
  - Developing distributed computing in Java objects with Java Advanced Image, RMI, Socket, JMI for collaborative graphical works in Web.
- **Sr. Software Engineer, Gamma Computer, Woodland Hills, CA (June 2000 – March 2001)**
  - Designing and developing N-tier E-Business applications with UML, J2EE (Servlet, JSP, JavaBeans, EJB), html, JavaScript, and JDBC on *WebLogic 5.1* Web Application Server
  - Administrating and performance tuning *WebLogic* server, Nokia WAP server and Developing WML, *MSSQL* and *CloudScape* DB scheme
  - Tuning and Measuring performance of Web application on JVM and Posix performance pack with *JMeter* and *Load-Runner*
- **Sr. Software Engineer, Magnet Interactive, Culver City, CA (February 2000 – June 2000)**
  - Developing Java middle-ware web application project with J2EE (Servlet, JSP, JavaBeans, EJB), html, JavaScript, and JDBC on *Websphere* and *JRUN* Web Application Server, *Oracle8i* and *VisualAge for Java* enterprise edition for multi-tier e-business.
  - Designing shopping system in UML with Rational Rose 2000
- **Web Developer, SBCI, Pasadena, CA (September 1999 – February 2000)**
  - Developing E-Business project with J2EE (Servlet, JSP, JavaBeans, EJB), html/jhtml, JavaScript, and JDBC on *ATG Dynamo* Web Application Server, *Oracle8i*, and *Symantec Visual Café* DB.
- **R&D Assistant, BethelSoft Inc., Buena Park, CA (June 1999 - September 1999)**
  - Developing E-Business project for server site applications with J2EE (Servlet, JSP, JavaBeans, EJB), html, JavaScript, and JDBC on *Websphere* Application Server, *Oracle8i* and *VisualAge for Java* enterprise edition
  - R&D assistant to find a solution of E-Business
- **Web Master, PDPC group, University of Southern California, LA, CA (August 1998 – April 2001)**
- **2D/3D Graphics Programmer, Behavior Technology Lab., University of Southern California, Redondo Beach, CA (January 1998 – November 1998)**
  - Developing 2D/3D graphics learning application with JavaCC and Java 2D/3D API for distributed computing through Internet. Sponsored by Air force, Naval research, JPL/NASA.
- **Teaching Assistant, University of Southern California, LA, CA (September 1998 – June 1999)**
  - Digital Logic Circuit and Design
- **Research Assistant, University of Southern California, LA, CA (January 1997 – June 1999)**
  - Investigating static analysis, especially alias analysis in Java for parallel/distributed computing. Sponsored by NSF.

- **R&D Intern, *Skunk Technology, Santa Monica, CA (May 1997 – September 1997)***
  - Researching fault-tolerant computing and load balancing for distributed computing on web based Internet application
- **Research Assistant, *University of Southern California, LA, CA (August 1995 – December 1996)***
  - Load-balancing and Implementing parallel/distributed computing of image detection system. Sponsored by NSF and DARPA.
- **Grader, *University of Southern California, LA, CA (January 1995 – December 1995)***
  - For the course, Advanced Artificial Intelligence.
- **Lieutenant, *Korean Army (November 1991 – May 1992)***
- **Research/Teaching Assistant, *Yonsei University, Seoul, Korea (March 1990 – October 1991, June 1992 – July 1993)***
  - Analyzing the queuing mechanism, the routing, and flow control of ATM switching. Sponsored by Korean Research Development Institute (KRDI)
  - Teaching Assistant for Network and Circuit System

## Education

- ***PhD in Computer Engineering (August 2001), Department of Electrical Engineering, Univ. of Southern California.***
- ***MS in Computer Science (December 1998), Department of Computer Science, Univ. of Southern California.***
- ***MS in Electronic Engineering (August 1991), Department of Electronic Engineering, Yonsei University (Seoul, Korea).***
- ***BS in Electronic Engineering (February 1989), Department of Electronic Engineering, Yonsei University (Seoul, Korea).***

## Certification

- ***Sun Certified Java Programmer for JDK-1.1 (July 1999)***
- ***Bea WebLogic server Application Development Educational Service (July 2000)***
- ***Bea WebLogic server Administration Educational Service (July 2000)***

## SKILLS

- ***Computer language:*** C/C++ (MPI, socket, OpenGL, .NET etc.), JAVA (applet, servlet, jsp, JavaBean, EJB, RMI, socket, JDK-1.3 2D/3D graphics, JAI, JDBC, JINI, JNI etc.), JavaCC

(Java Compiler Compiler), JavaScript, LISP, SQL, HTML, XML (WML, VoiceXML), VRML, tel/tk, Motif, SISAL, UML, Visual Basic 6.0, Visual Basic 6 and .NET, Perl.

- **Hardware:** RS6000, Sun, HP, Silicon Graphics, IBM-PC, 80x86, SP2, T3D, AS/400, Alpha Tru64
- **Operating System:** UNIX, Linux, window95/98/NT2000/, MS-DOS, Qshell
- **DBMS:** Oracle8i, DB2, MSSQL, MySql
- **Other Knowledge:** Symantec (WebGain) Visual Café DB 3.c and Enterprise Edition, IBM VisualAge for Java enterprise edition 3.0, IBM Websphere enterprise 3.0, NetObject Fusion, Lotus Notes, ATG Dynamo WAS 4.5, Rational Rose 2000, IBM San Fransisco, NOKIA WAP server 1.1.1, WebLogic 5.1, Apache and TomCat server, Apache Jmeter-1.5.1, Forte, Jboss, Mercury Interactive Load-Runner, tcsh/bash/csh/ksh, Corba, VisiBorker, SSFNet.

## COMMITTEE AT CSULA

- (1) Program Committee of 2003, Student Activity
- (2) Committee of 2003 Commencement

## COMMITTEE

- (1) Program Committee of 2004, I<sup>n</sup>SITE (Informing Science + IT Education), International Joint Conference, Rockhampton, QLD Australia, June 25-28, 2004
- (2) Program Committee of the 2004 International Conference on Parallel and Distributed Processing Techniques and Applications, (PDPTA'04: June 21-24, 2004, Las Vegas, Nevada, USA)
- (3) Program Committee of the 2004 International Conference on Internet Computing, (IC'04: June 21-24, 2004, Las Vegas, Nevada, USA)
- (4) Program Committee of the 2004 International Symposium on Web Services and Applications (ISWS'04: June 21-24, 2004, Las Vegas, Nevada, USA)
- (5) Program Committee of the 2004 International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences (METMBS'04: June 21-24, 2004, Las Vegas, Nevada, USA)

## INVITED TALK

- (1) “Server Site Web Development for E-Business in Java and .NET”, SookMyung Women’s University, Seoul, Korea, Aug 23 2003

## PAPER REVIEWS

- (1) 2004, I<sup>n</sup>SITE (Informing Science + IT Education) International Joint Conference, Rockhampton, Australia, June 25-28, 2004
- (2) Journal of Communications and Networks, 2003
- (3) SBAC-PAD 2003 (The 15th Symposium on Computer Architecture and High Performance Computing), Brazil 2003
- (4) JECR (Journal of Electronic Commerce Research)

## **BRIEF PAPER FOR KISTI (Korea Institute of Science and Technology Information), SEOUL, KOREA**

- (1) Jongwook Woo, "The Introduction of Digital Rights Management", KISTI The Technical News Brief, Aug 2003
- (2) Jongwook Woo, "The .NET and Web Service", KISTI The Technical News Brief, Aug 2003
- (3) Jongwook Woo, "The J2EE and Web Service", KISTI The Technical News Brief, Aug 2003
- (4) Jongwook Woo, "The Introduction of Web Service", KISTI The Technical News Brief, Aug 2003
- (5) Jongwook Woo, "J2EE Application Server", KISTI The Technical News Brief, May 2003
- (6) Jongwook Woo, "The Comparison of J2EE and .NET", KISTI The Technical News Brief, May 2003
- (7) Jongwook Woo, "The .NET Introduction", KISTI The Technical News Brief, May 2003
- (8) Jongwook Woo, "The Middleware Component Model: EJB, COM, Corba", KISTI The Technical News Brief, June 2002

## **JOURNAL PAPERS SUBMITTED IN 2003**

- (1) Jongwook Woo, "Static Analysis for Java with Alias Representation in High-Performance Computing", Journal of Parallel and Distributed Computing Practices (PDCP)
- (2) Jongwook Woo, "The Comparison of J2EE and .NET for e-Business", Communications of the Association for Information Systems (CAIS)

## **PUBLICATIONS**

### **Journal Papers**

- (1) Jongwook Woo, Jean-Luc Gaudiot, Andrew L Wendelborn, "Alias Analysis in Java with Reference-Set Representation for High-Performance Computing", Accepted in *International Journal of Parallel Programming, IJPP*, 2003

### **Proceedings and Theses**

- (1) Jongwook Woo, Seunghyup Ryu, Jaiyong Lee, Jaehoon Jeong, Jungsoo Park, HyongJoon Kim, "The Extended BGP Algorithm for Multihoming", in *Proceedings of International Technical Conference on Circuits/Systems, Computers and Communications, ITC-CSCC 2003*, July. 2003

- (2) Jongwook Woo, Seunghyup Ryu, Jaiyong Lee, Jaehoon Jeong, Jungsoo Park, "BGP Extension for Multihoming in IPv6", in *Proceedings of Eighteenth Korea Information Processing Society*, Nov. 2002
- (3) Jongwook Woo, Seunghyup Ryu, Jaiyong Lee, "The Investigation of Load-Sharing Mechanisms among Site Exit Routers for Multihoming of IPv6", ETRI Technical Report, June 2002
- (4) Jongwook Woo, "Alias Analysis for Java with Reference-Set Representation in High-Performance Computing", *PhD Thesis*, August 2001.
- (5) Jongwook Woo, Je-Hak Woo, Isabelle Attali, Denis Caromel, Jean-Luc Gaudiot, Andrew L Wendelborn, "Alias Analysis for Exceptions in Java", in *Proceedings of Twenty-Fifth Australasian Computer Science Conference*, vol. 24, no. 1, IEEE Press, Jan. 2002.
- (6) Jongwook Woo, Je-Hak Woo, Isabelle Attali, Denis Caromel, Jean-Luc Gaudiot, Andrew L Wendelborn, "Alias Analysis for Java with Reference-Set Representation", in *Proceedings of Eighth International Conference on Parallel and Distributed Systems, ICPADS 2001*, IEEE Computer Society Press, pp 459-466, June 2001.
- (7) Jongwook Woo, Je-Hak Woo, Isabelle Attali, Denis Caromel, Jean-Luc Gaudiot, Andrew L Wendelborn, "Alias Analysis On Type Inference in Class Hierarchy in Java", in *Proceedings of Twenty-Fourth Australasian Computer Science Conference, ACSC 2001*, IEEE Computer Society Press, pp 206-214, Jan 2001.
- (8) Je-Hak Woo, Jongwook Woo, Jean-Luc Gaudiot, "Alias Analysis in Java with Referred-set", in *Proceedings of Fourth International Conference on High Performance Computing in Asia-Pacific Region, volume 1, HPC-ASIA 2000*, IEEE Computer Society Press, pp 485-494, Dec 2000.
- (9) Yongwha Chung, Jongwook Woo, Ram Nevatia, Victor K. Prasanna, "Load Balancing Strategies for Symbolic Vision Computations", in *Proceedings of Third International Conference on High Performance Computing, HiPC 1996*, IEEE Computer Society Press, pp 263-269, Dec 96.
- (10) Youngkwan Cho, Ulrich Neumann, and Jongwook Woo, "Improved Specular Highlights with Adaptive Shading", in *Proceedings of Computer Graphics International, CGI 1996*, IEEE Computer Society Press, pp 38-46, June 1996.
- (11) Jongwook Woo, "The Queuing Analysis for ATM Switching of Mixed CBR and VBR Traffics with priority", *Dissertation for M.S. Degree*.
- (12) Joon-Ho Lee, Joong-Gyu Kim, JongWook Woo, MigNong Park, SangBae Lee, "Routing and Flow Control for Computer Communication Network", *Korea Research Development Institute*.

## Technical Reports

- (1) Jongwook Woo, "The Comparison of J2EE and .NET for e-Business", The Technical Report (hipic-10292003) of High-performance Information Computing Center