

ICWS 2006 **Tutorial 1**

SOA and Web Services

Liang-Jie Zhang
IBM T.J. Watson Research Center
Chair of IEEE Technical Committee on Services Computing
zhanglj@ieee.org

Abstract:

This tutorial presents the foundational knowledge for the researchers and practitioners on Service-Oriented Architecture (SOA) and Web services. The traditional “triangle” SOA and variations that better support SOA services and solutions will be examined. Critical Web services infrastructures will be covered, such as WSDL, BPEL, WSRF, Discovery, Composition, Registry, and Web services invocation and relationship binding. How Web 2.0 and SOA can benefit with each other will also be explored. An IEEE SOA Solution Reference Architecture standardization initiative will be introduced in this tutorial to illustrate how different pieces of technology components can be used to build reusable, flexible, and extensible SOA solutions. Finally, the presenter will depict research and development challenges and directions in the field of SOA and Web services. The target audiences are all-level researchers, practitioners, and students. This tutorial material is created for the IEEE Body of Knowledge initiative on Services Computing, which is sponsored by the IEEE Computer Society Technical Committee on Services Computing.

About the Presenter:

Dr. Liang-Jie (LJ) Zhang is a Research Staff Member (RSM) in Services Technologies Department at IBM T.J. Watson Research Center. He has been leading SOA and Web Services for Business Consulting Services and Industry Solutions research since 2001. He is the founding chair of the Services Computing PIC (Professional Interest Community) at IBM Research and lead professional activities for IBM’s Services Computing discipline. In 2004 and 2005, Dr. Zhang was appointed as the Chief Architect of Industrial Standards at IBM Software Group, where he played leadership role in helping define IBM’s strategy for industrial standards and open architecture for service-oriented business solutions.

Dr. Zhang is one of the worldwide leaders of Service-Oriented Architecture (SOA) and Web Services. Dr. Zhang was the lead inventor and architect of Business Explorer for Web Services (BE4WS), WSIL Explorer (part of IBM Emerging Technologies Toolkit), and Web Services Outsourcing Manager (WSOM). He led a team from across IBM labs and divisions to create the first comprehensive SOA-based Managed E-Hub to enable services provisioning and business on-boarding for supporting business process on demand. LJ is the Editor-in-Chief of the first and best research journal dedicated to Web Services Research. He is the founding chair of the Technical Committee on Services Computing, IEEE Computer Society, the General Chair of the 2006 IEEE International Conference on Web Services (ICWS 2006) and the 2006 IEEE International Conference on Services Computing (SCC 2006).