

## Keynote

### Service Oriented Architecture (SOA) in Industrial Systems



**Professor Norihisa Komoda**

*Graduate School of Information Science and Technology,  
Business Information Systems  
Osaka University*

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#### **Abstract**

Service Oriented Architecture (SOA) is intended as a design framework for realizing rapid and low-cost system development and improving total system quality. Using Web services standards and technologies, SOA is mainly applied to business information systems and is rapidly becoming a standard approach for enterprise information systems. SOA has been successfully applied to industrial systems such as Supply Chain Management (SCM), order entry system, etc. However, when applied to the low layer management and control systems, Web services face significant challenges because of particular requirements. Several issues need to be addressed when applying the SOA paradigm to real-time system, which include response time, support of event-driven, asynchronous parallel applications, complicated human interface support, reliability, etc.

In this talk, Professor Komoda will briefly explain what SOA is, followed by detailed discussion on several issues that arise when SOA is applied to industrial systems. Finally, examples of industrial systems (business system, command and control systems), applied SOA will be introduced. A full paper from Professor Komoda is also included in the proceedings of this conference.

#### **Biography**

Norihisa Komoda is a professor of the Department of Multimedia Engineering, Graduate School of Information Science and Technologies, Osaka University since 2002. He received the B. Eng. and M. Eng. degrees in electrical engineering and the Dr. Eng. from Osaka University in 1972, 1994 and 1982 respectively. He was with Systems Development Laboratory, Hitachi Ltd. from 1974–1991. He was a visiting researcher at the Department of Engineering Systems, UCLA from 1981–1982. Since 1991, he joined Osaka University as a professor at the Faculty of Engineering. His research areas includes Information system in the area of manufacturing and distribution industry, Knowledge based information processing, Systems engineering, Information systems planning and design (EC, Workflow, CSS, etc.).

Prof. Komoda received IEEJ Technical Development Award, IEEJ in 2000, Japan, IEEJ Distinguished Paper Award in 1998, the Award for Outstanding Technology, SICE, Japan, in 1987, and the Award for Outstanding Paper, SICE, Japan in 1986. He served as a program chair of ETFA'96. He had also, played numerous key roles in organizing and program committees including track chair at various international conferences, such as, IECON, ETFA, and ISIE. He is a member of the IEEE and the Institute of Electrical Engineers of Japan.