This issue of the *International Journal of Web Services Research* (JWSR) includes five articles on various topics of Web services.

The first article is titled “XML Security with Binary XML for Mobile Web Services.” Kangasharju, Lindholm, and Tarkoma study the factors and solutions for XML- (extensible markup language) level security control. They propose to integrate an alternate format of security for binary XML. Recommendations on security usage based on experiments are proposed.

The second article is titled “An Access-Control Framework for WS-BPEL.” Paci, Bertino, and Crampton state that the current ad hoc industry standard for services composition, business process execution language for Web services (BPEL4WS), does not provide support for specifying security policies or constraints on service workflows. To address this issue, they propose extensions for BPEL4WS standards with role-based access control.

The third article is titled “XML Compression for Web Services on Resource-Constrained Devices.” Werner, Buschmann, Brandt, and Fischer address how to eliminate SOAP-related significant overhead in environments with limited resources (e.g., network bandwidth or computing devices). They propose an approach that compresses SOAP data utilizing XML schema or WSDL (Web services definition language) documents and generates a single custom pushdown automaton. The transitions are tagged with short binary identifiers instead of XML tags during compression.

The fourth article is titled “A Reservation-Based Extended Transaction Protocol for Coordination of Web Services.” Zhao, Kart, Moser, and Melliar-Smith address the issue of Web-services-oriented transactions. Since Web services may involve datasets belonging to different enterprises, classical distributed transaction techniques may not be sufficient. The authors propose to adopt an explicit reservation phase and an explicit confirmation and cancellation phase to support business activities across business boundaries.

The fifth article is titled “DSCWeaver: Synchronization-Constraint Aspect Extension to Procedural Process Specification Languages.” Wu, Pu, Sahai, and Barga address the synchronization issue of business processing. They present DSCWeaver, a tool that enables a synchronization-aspect extension to BPEL4WS. Directed-acyclic-graph synchronization constraint language (DSCL) is used to achieve fine granularity, declarative syntax, and validation support for synchronization modeling.
As a research staff member and program manager of application architectures and realization at IBM T.J. Watson Research Center, Dr. Zhang has made significant original contributions to services computing innovations and interactive media systems. He is the founding chair of IBM Research’s Services Computing Professional Interest Community and has been leading an IBM Service-Oriented Architecture (SOA) tooling and architecture research project for years. He has been coleading IBM’s SOA Solution Stack (aka SOA Reference Architecture: Solution View) project since 2004. His new book Services Computing was published by Springer in 2007. He has received 2 IBM Outstanding Technical Achievement Awards, 9 IBM Plateau Invention Achievement Awards, an Outstanding Achievement Award from the World Academy of Sciences, and an Innovation Leadership Award from the China Institute of Electronics. Dr. Zhang has 37 granted patents and 20 pending patent applications. As the lead inventor, he holds federated Web services discovery and dynamic services composition patents. LJ chairs the SOA and Web Services standards working group to define the IEEE 1723 Standard for SOA Solution Reference Architecture. He is the chair of IEEE Computer Society Technical Committee on Services Computing.