This issue of the International Journal of Web Services research (JWSR) collects five articles on various topics of Web services.

The first article is titled *WSBen: A Web Services Discovery and Composition Benchmark Toolkit*. Oh and Lee present *WSBen*, a benchmark toolkit for testing Web services discovery and composition algorithms. Three use cases in different application domains are presented: Web service composition, AI planning, and the laws of networks in Physics community.

The second article is titled *USDL: A Service-Semantics Description Language for Automatic Service Discovery and Composition*. Kona, Bansal, Simon, Mallya, Gupta, and Hite present *USDL* (Universal Service-Semantics Description Language), a Web Ontology Language (OWL)-based language that formally describes the semantics of Web services. They prove some useful properties about the language and present a theory of service substitution using USDL.

The third article is titled *Using Web Service Enhancements to Establish Trust Relationships with Privacy Protection*. Wu and Weaver tackle the issue of lack of effective trust establishment mechanisms, especially, how collaborating organizations bridge extant relationships among cooperating parties while ensuring privacy and ownership control.

The fourth article is titled *Web Services Discovery with Rough Sets*. Li, Yu, Sahota, and Qi present *ROSSE*, a Rough Sets based Search Engine for Web service discovery. ROSSE features in its capability of dealing with uncertainty of service properties when matching services.

The fifth article is titled *A Model-based Approach for Diagnosing Faults in Web Service Processes*. Yan, Dague, Pencolé, and Cordier address the issue of how to detect which Web services are responsible for a failed business process. By converting a Web service orchestration language (BPEL4WS) into synchronized automata, they propose a model-based approach to diagnose the faults in a Web service-composed business process.
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.