This issue of the *International Journal of Web Services Research* (IWSR) collects five papers on various topics of Web services.

The first article is titled *Karma2: Provenance Management for Data Driven Workflows*. Simmhan, Plale, and Gannon address the issue of how to record uniform and usable provenance metadata of a workflow, which meets the domain needs while minimizing the modification burden on the service authors and the performance overhead on the workflow engine and the services. They propose a framework that generates discrete provenance activities during the lifecycle of a workflow execution that can be aggregated to form data and process provenance graphs.

The second article is titled *Mining and Improving Composite Web Services Recovery Mechanisms*. Bhiri, Gaaloul, and Godart explore how to ensure reliability of composite services. They present a reengineering approach that examines composite service executions logs to improve recovery mechanisms. Their approach is centered on a set of mining techniques that analyze transactional behaviors of a composite service from an event-based log.

The third article is titled *Business Process Control-flow Complexity: Metric, Evaluation, and Validation*. Cardoso presents a metric to analyze the control-flow complexity of business processes. The metric is evaluated in terms of Weyuker’s properties. Experimental results are also reported.

The fourth article is titled *Result Refinement in Web Services Retrieval based on Multiple Instances Learning*. Zou, et al. intend to enhance the traditional category-based service location approach in UDDI registries. They present a method to refine coarse matching results through iterations. The key idea is to examine the operations provided by a candidate service to ensure that they are usable to users.
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.