Cloud Computing implements the next generation Internet computing by realizing cost-oriented and on-demand provisioning of resources for arbitrary customers. IT resources, platforms and services are made available at virtually unlimited scale for everybody, everywhere, and anytime. Since Cloud environments help to gain access to specialized software, dedicated computational resources, or new storage facilities, they open new possibilities for any kind of scientific work that relies on computational or data analysis. Such Cloud Computing environments and their scientific workload are an interdisciplinary challenge on their own – the Cloud infrastructure must consider the specific needs of the scientific application, and the scientific application must consider the targeted Cloud runtime environment. On the one hand, this special issue focuses on Cloud Computing architectures and services designed to fulfill the requirements of different fields of science. On the other hand, it considers necessary adoptions in scientific approaches (e.g. in algorithms) in order to prepare them for Cloud execution.

Relevant topics include but are not limited to:
- Cloud architectures and Cloud systems for science and examples of scientific Cloud applications
- Specialized Cloud services for transdisciplinary use cases and their business models
- Potential of Cloud services for scalable research (e.g. cost-benefit balancing)
- Cloud standards and Cloud Interfaces for end users (e.g. data formats, user interfaces)
- Cloud security and privacy aspects for scientific data as well as problems like vendor-lock-in
- Authentication, Authorization, and Accounting in the Cloud

**Timelines:**
- Deadline for initial submission: June 31, 2013
- Time for the first decision: September 13, 2013
- Deadline for submitting revisions: November 1, 2013
- Second round review: December 16, 2013
- Time for the final decision: January 31, 2014
- Publication date: March, 2014

**Submission Instructions:**
All authors are invited to obtain early feedback on possible submissions by e-mailing an abstract to the Guest Editors. Papers will be rigorously refereed by four peer reviewers of the Journal. Submission of a manuscript to this special issue of JIDPS implies that no similar paper is already accepted or will be submitted to any other conference or journal. Papers of an appropriate standard not included in the special issue may be considered for publication in a regular issue of JIDPS. Manuscripts should be submitted through the journal editorial management system: https://jidps.rndsphere.com. A paper template can be downloaded from the same website.

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