Welcome to the Proceedings of the 7th International Workshop on Semantic Web Applications and Tools for Life Sciences (SWAT4LS 2014)

Preface

It is our great pleasure to welcome you to the 7th International Workshop on Semantic Web Applications and Tools for Life Sciences (SWAT4LS 2014). SWAT4LS is an international workshop to meet and to present high-quality research results and relevant demos, applications and tutorials from all fields of Semantic Web technologies in Life Sciences.

The objectives of the SWAT4LS workshop are to provide a forum dedicated to the dissemination of original research, the discussion of practical insights, and the reporting on relevant experience relating to the adoption of Web based information systems and Semantic technologies in biomedical informatics and computational biology. The workshop also aims at providing a forum to exchange ideas, for example, through poster papers and demo papers.

SWAT4LS 2014 was organized at Freie Universtität Berlin, December 9-11, 2014, Berlin, Germany.

The call for papers solicited research contributions in eHealth, biomedical and clinical informatics, systems biology, computational biology, drug discovery, bioinformatics and biocomputing. The call for contributions attracted 39 submissions from around the globe. The technical program shows a carefully selected presentation of research and development in 8 full papers, 4 short talks and 2 position papers, 9 demos and 7 posters. These were complemented by 6 tutorials and 3 keynote talks provided by:

Keynotes
- Andre Dekker, MAASTRO Clinic, NL
  Knowledge Engineering in Radiation Oncology – A real-world application of Semantic Web technology
- Stefan Decker, Insight Centre for Data Analytics, IE
- Maryann Martone, UCSD, USA
  Data-Knowledge Transition Zones within the Biomedical Research Ecosystem

Tutorials
- Simon Jupp and James Malone, EMBL-EBI
  RDF linked data at the European Bioinformatics Institute
- Ratnesh Sahay, Insight Centre for Data Analytics
  Ontologising the Health Level Seven (HL7) Standard
- Martin Rezk, Free University of Bozen-Bolzano

Ontologies Ontop Databases
- Eric Prud'hommeaux, World Wide Web Consortium (W3C)
  RDF validation and transformation using Shape Expressions
- Jin-Dong Kim, Database Center for Life Science (DBCLS)
  Natural Language Interfaces for SPARQL endpoints
- Adrian Paschke and Ralph Schäfermeier, Freie Universtität Berlin
  Introduction to rule systems

The SWAT4LS 2014 organizers were pleased to note the increasingly applied nature of submissions, with the increasing experience of the community demonstrated by an abundance of running implementations. To place emphasis on the practical use of Semantic Web technologies in Life Sciences, SWAT4LS 2014 again included a one day Hackathon.

The SWAT4LS 2014 organizers wish to thank the excellent program committee for their hard work in reviewing the submitted papers. Their criticism and very useful comments and suggestions were instrumental to achieve a high quality of publication. We also thank the workshop authors for submitting good papers, responding to the reviewers' comments, and abiding by our proceedings production schedule. We further wish to thank the keynote speakers to contribute their interesting talks. We are very grateful to our sponsors the Freie Universtität Berlin, National Centre for Biomedical Ontology, Ontoforce, Corporate Semantic Web, Journal of Biomedical Semantics, and W3C.

Berlin, Germany, December 2014,

Adrian Paschke, Albert Burger, Paolo Romano, M. Scott Marshall, Andrea Splendiani