# Preface

Traditionally scientific dissemination has been relying heavily on publications and presentations. The findings reported in these articles are often backed by large amounts of diverse data produced by complex experiments, computer simulations, and observations of physical phenomena. Although publications, methods and datasets are often related, due to this avalanche of data it remains extremely hard to correlate, reuse and leverage scientific data. Semantic Web technologies provide a promising means for publishing, sharing, and interlinking data to facilitate data reuse and the necessary correlation, integration, and synthesis of data across levels of theory, techniques and disciplines. However, even when these data become discoverable and accessible, significant challenges remain in making intelligent understandings of these data and scientific discoveries that we anticipated.

Our past three series (LISC2011, LISC2012 and LISC2013) have seen many novel ideas of using Semantic Web technologies for integrating scientific data (for example about real experiments or from simulations), or enabling reproducibility of research via online tools and Linked Data. The theme for LISC2014 is "Making Sense out of Data Through Linked Science". Here we focus on new ways of discovering interesting patterns from scientific data, which could lead to research validation or identification of new hypotheses and acceleration of the scientific research cycle. We target both new results through making use of semantic reasoning or making innovative combination of existing technologies (such as visualization, data mining, machine learning, and natural language processing) with SW technologies to enable better understanding of data. One goal is to create both an incentive for scientists to consider the Linked Science approach for their scientific data management and an incentive for technologists from different disciplines to work together towards the vision of powering science with technologies.

LISC2014 was hosted at the 13th International Semantic Web Conference (ISWC2014), in Riva del Garda, Trentino, Italy. Twenty-seven attendees enjoyed the opening keynote "Making more sense out of social data" by Harith Alani (KMI, the Open University, UK), followed by excellent presentations of the eight regular papers collected in these proceedings. We continued the tradition of a "working" workshop with a plenary discussion on the challenges and opportunities of using Semantic Web technologies for sense making. The results of this discussion is published at FigShare, and can be cited as:

Zhao, Jun; Patton, Evan; Vardeman, Charles; Peroni, Silvio; Osborne, Francesco; Nart, Dario De; Dumontier, Michel; Diallo, Gayo; van Ossenbruggen, Jacco (2014):
LISC 2014 - Results: Discussion on Challenges in Making Sense Out Of Data Using Linked Data Technologies.
http://dx.doi.org/10.6084/m9. figshare. 1209243

Overall, this edition continued providing a successful forum for discussing how semantic web technologies and linked data can help science. We wanted to thank the entire program committee for helping to assemble the program and the attendees for their enthusiastic participation. The LISC 2014 Co-organizers:

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