

# Preface

This volume contains the proceedings of the 5th International Provenance and Annotation Workshop (IPAW), held during June 10–11, 2014 at the German Aerospace Center (DLR) in Cologne, Germany. For the first time, IPAW colocated with the Workshop on the Theory and Practice of Provenance (TaPP). Together the two leading provenance workshops anchored ProvenanceWeek 2014, a full week of provenance-related activities that included a shared poster session, a panel on reproducibility in science, and tutorials on the W3C PROV standard, on provenance analytics, and the uses of provenance in cell biology. The week was rounded out with afternoon-long birds-of-a-feather activities around constructing a provenance record from data when provenance was not collected in the first place, and benchmarking of provenance systems. This collection constitutes the peer-reviewed papers of IPAW 2014. These include 14 long papers which report in-depth the results of research around provenance and four extended abstracts that discuss tools and services that were presented in the form of a system demonstration. Finally, we have included 20 short abstracts of the joint IPAW/TaPP poster session. The final papers, demos, and poster abstracts were selected from a total of 53 submissions. All full-length research papers and demo papers received a minimum of three reviews.

The papers of IPAW 2014 provided a glimpse into state-of-the-art research and practice around the capture, representation, and use of provenance. Since provenance often results in graphs, and large ones at that, several of the papers in this collection proposed abstract graph models and methods with well-defined properties, properties that can hold even when sanitized for potentially sensitive information. Tools are the focus of a number of papers in this collection; these are innovative software applications that solve a particular problem and are evaluated experimentally. They are often converging on the W3C PROV model for provenance interchange. Some papers discussed tools that enable provenance capture from software compilers, from web publications, and from scripts, using existing audit logs, and employing both static and dynamic instrumentation. New methodologies for provenance aggregation and use appeared in the collection as well. We see the evaluation of a linked data approach to provenance publishing, the generation of documentation from provenance, and application of provenance to protect attribution in scientific discovery.

In closing, we would like to thank the members of the Program Committee for their thoughtful reviews, Dr. Andreas Schreiber (Local Chair) and Carina Haupt for their excellent organization of IPAW and ProvenanceWeek 2014 at DLR, and—last but not least—the authors and participants for making IPAW the stimulating and successful event that it was.

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