

June 28, 2016

To the SWSA Board:

I am happy to recommend Marcin Wylot's dissertation "Efficient, Scalable, and Provenance-Aware Management of Linked Data" for the SWSA Distinguished Dissertation Award. The thesis makes substantial contributions to our knowledge about how to create scalable systems for dealing with graph oriented data and for tracking provenance within such systems. Both of these dimensions are crucial for dealing with the heterogeneity of Linked Data.

An important contribution from my perspective is that the dissertation has shown how theoretical concepts from the database community around provenance polynomials can be applied practically at scale to RDF data. Moreover, the dissertation establishes a counter intuitive finding that by using provenance one can actually improve query performance in RDF database systems.

The dissertation's contributions have been published in two ISWC papers, two WWW papers and a IEEE Transactions on Knowledge and Data Engineering journal paper establishing their noteworthiness in our field.

Additionally, I would comment that, beyond the technical contributions made within the dissertation, the author has brought the community together. For example, he lead the effort of four different institutions to empirically evaluate the use of NoSQL stores for RDF querying processing – a technical and organizational feat.

In summary, I think this dissertation is an impressive exemplar of what can be produced by the Semantic Web Community.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Groth". The signature is fluid and cursive, with a long horizontal stroke extending from the end.

Dr. Paul Groth
Disruptive Technology Director
Elsevier Labs