**Cover Letter**

1 April 2020

To

Dr. Ian Horrocks

Editor-in-Chief, Journal of Web Semantics

**Ms. Ref. No.:**

**Manuscript Title**: WePROV: An Ontology for workflow evolution provenance analytics

Dear Dr. Ian Horrocks,

The enclosed manuscript is being submitted for possible publication in Journal of Web Semantics as a peer-reviewed paper. The submission fits the scope of the journal under ‘Ontology Engineering’ category.

In this paper, we present a Workflow Evolution Provenance ontology (WePROV) that defines concepts, features, attributes, and relations to describe the workflow and their evolution process. To this, we discuss the underline provenance model and the design process of the proposed ontology. Further, we define the functional requirements for a workflow evolution ontology and validate the proposed ontology through SPARQL queries for these requirements. We also present WePROV aligned dataset, built using open-source scientific workflows, to demonstrate the real-world applicability of the ontology. Our research shows that an ontology capable of describing the workflows and their evolutionary activities in a generic, machine-readable and interoperable format, enables automatic tracking of workflow changes and traversing between their different versions.

The paper is authored by Anila Sahar Butt and Peter Fitch. **Anila Sahar Butt** is a Postdoctoral Fellow with CSIRO, Canberra, ACT, Australia. Her research interests include data modelling, data integration, knowledge graph, and provenance. Earlier she received the Ph.D. degree in semantic Web from the Australian National University, Australia, in 2017, and the MS (Information Technology) degree from the National University of Science and Technology, Pakistan, in 2010. **Mr. Peter Fitch** is a Principal Research Scientist with CSIRO, Canberra, ACT, Australia. He is a Research Leader and a Manager with over 20 years research and industry leadership and management experience. He has led the CSIRO environmental information systems research program in CSIRO’s Land and Water Department for five years until 2014 and currently leads projects as part of the Digiscape Future Science Platform initiative. He has significant experience in program development and management, development of research strategy, and implementation of research plans.

We hope you will send this paper through the required peer-review system. Thanks.

Sincerely,

Anila Sahar Butt & Peter Fitch

CSIRO, Australia.