Building Scholarly Knowledge Bases with Crowdsourcing and Text Mining

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Abstract

For centuries, scholarly knowledge has been buried in documents. While articles are great to convey the story of scientific work to peers, they make it hard for machines to process scholarly knowledge. The recent proliferation of the scholarly literature and the increasing inability of researchers to digest, reproduce, reuse its content are constant reminders that we urgently need a transformative digitalization of the scholarly literature. Building on the Open Research Knowledge Graph (http://orkg.org) as a concrete research infrastructure, in this talk we present how using crowdsourcing and text mining humans and machines can collaboratively build scholarly knowledge bases, i.e. systems that acquire, curate and publish data, information and knowledge published in the scholarly literature in structured and semantic form. We discuss some key challenges that human and technical infrastructures face as well as the possibilities scholarly knowledge bases enable.