Proceedings of the 2nd AAAI Bridge on Artificial Intelligence for Scholarly Communication
2nd AI4SC@AAAI

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Abstract. Artificial intelligence (AI) has become a key enabler in scholarly communication, supporting researchers across disciplines. The 2nd AAAI Bridge on Artificial Intelligence for Scholarly Communication (AI4SC) aims to bring together researchers from all disciplines who develop or use AI technologies in their work to share their methods, approaches, experiences, identify common problems, facilitate collaboration and define future research directions. During this edition, five papers were accepted and published by TIB Open Publishing. We present an overview and brief summary of the accepted submissions.

Keywords: Artificial Intelligence, Scholarly Communication, AI for Scholarly Communication

1. Introduction

Scholarly work is a resource that helps societies solve complex problems and improve the quality of life, for example, by achieving sustainable development goals. To address the challenges of the increasing number of papers published every year, as well as the vast amount of already published articles, researchers are increasingly using AI in the throughout research life cycle. Among other tasks, AI is leveraged to support literature discovery, knowledge extraction, organization and generation, writing assistance, peer review, and dissemination, thereby accelerating the pace of research and widening access to knowledge [1], [2].

The 2nd AAAI Bridge on Artificial Intelligence for Scholarly Communication (AI4SC)[1] aims to invite researchers from all disciplines who are developing or using AI in scholarly communication to share their methods, approaches, experiences, identify common problems, facilitate collaboration and define future research directions. In this year's edition, five papers were accepted for presentation at the workshop.

2. Overview of Papers Accepted

Five papers, exploring citation management, agentic AI architectures, evidence-grounded ontology construction, provenance-anchored scientific narratives, and conceptual analysis of hallucinations in scholarly LLMs were accepted.

- **Unmediated AI-Assisted Scholarly Citations** by Szeider [3] proposes a system that combines LLMs with a citation database, such as DBLP, for citation generation. This system aims to guarantee accuracy and prevent hallucinated references by fetching citations directly from citation databases.
- **Synergistic AI Agents. Integrating Knowledge Graphs and Large Language Models for Scholarly Communication** by Chand et al. [4] propose the combination of KGs with agentic AI based on LLMs to mitigate LLM limitations such as provenance tracking, reasoning challenges, temporal staleness, and context dilution.
- **Echo-LLM: Evidence-Checked Hierarchical Ontology** by Dalal and McGinty [5] propose EchoLLM for ontology construction using LLMs. EchoLLM leverages LLMs for triples extraction, applying Natural Language Inference (NLI)-based technique for validation before embedding and clustering entities into a hierarchical ontology.
- **Trustworthy Scientific Narrative Generation Through Computational Provenance and Dynamic Authoring Frameworks** by Ellerm et al. [6] highlight the limitations of static, PDF-based scholarly articles and propose a publication container based on LLMs which model an article as a set of symbolic operations over provenance. This system couples provenance-generating eScience infrastructure with Dynamic Authoring Frameworks (DAFs) in order to express narratives as symbolic operations.
- **Hallucinations in Scholarly LLMs: A Conceptual Overview and Practical Implications** by Lamba et al. [7] analyse hallucinations in LLMs within academic contexts and discuss how fabricated citations, incorrect claims, and unreliable reasoning undermine scholarly integrity. The paper explores mitigation strategies, including Retrieval Augmented Generation (RAG), citation verification techniques, neuro-symbolic fact-checking and human-AI collaboration. It proposes a framework for designing trustworthy AI assistants that support rigorous academic research rather than distorting it.

3. Additional observations

Across accepted papers, several common themes emerge:

- Verification and trustworthiness: all contributions emphasize grounding AI outputs in evidence, provenance, and authoritative databases.
- Hybrid architecture: combining LLMs with structured knowledge sources, such as KGs, appears to be a recurring strategy.

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[1]https://sites.google.com/view/ai4sc/edition/ai4sc-2026-40th-aaai

- Mitigating hallucinations: some papers address hallucination risks directly and propose solutions.
- Future of scholarly communication: there is a shared vision for more dynamic, transparent, and computationally grounded scholarly workflows beyond traditional PDFs.

4. Organizing Committee

The organizing committee was composed of:

- Sören Auer: Professor of Data Science and Digital Libraries at Leibniz Universität Hannover, Director of the TIB - Leibniz Information Center for Science and Technology, Hannover, Germany
- Dirk Betz: TIB - Leibniz Information Center for Science and Technology, Hannover, Germany
- Claudia Biniossek: TIB - Leibniz Information Center for Science and Technology, Hannover, Germany
- Anna Jacyszyn (BRIDGE CHAIR): Postdoctoral researcher at FIZ Karlsruhe - Leibniz Institute for Information Infrastructure, Eggenstein-Leopoldshafen, Germany; coordinator of the Leibniz Science Campus Digital Transformation of Research (DiTraRe)
- Azanzi Jiomekong: Assistant Professor in Computer Science at the University of Yaounde I, Cameroon and Guest Researcher at TIB - Leibniz Information Centre for Science and Technology and University Library, Hannover, Germany
- Hannah Kim: Temple University, Philadelphia, Pennsylvania, USA
- Hande Küçük McGinty: Kansas State University, Manhattan, Kansas, USA
- Keith G. Mills: Louisiana State University, Baton Rouge, Louisiana, USA
- Allard Oelen: Postdoctoral researcher TIB - Leibniz Information Center for Science and Technology, Hannover, Germany. Front-end development lead for the Open Research Knowledge Graph (ORKG)
- Gollam Rabby: TIB - Leibniz Information Center for Science and Technology, Hannover, Germany
- Enayat Rajabi: Cape Breton University, Sydney, Nova Scotia, Canada

5. Program Committee Members

We gratefully acknowledge the following Program Committee members who contributed to the review process.

- Hamed Babaei Giglou, TIB - Leibniz Information Centre for Science and Technology and University Library, Hannover, Germany
- Fatemeh Bagheri, Saint Mary University, Halifax, Nova Scotia, Canada
- Hossein Beygi Nasrabadi, FIZ Karlsruhe - Leibniz Institute for Information Infrastructure, Eggenstein-Leopoldshafen, Germany
- Antrea Christou, Department of Engineering and Computer Science, Wright State University, USA
- Aryan Dalal, Kansas State University, Manhattan, Kansas, USA
- Daniil Dobriy, Vienna University of Economics and Business, Austria
- Mark Gahegan, University of Auckland, New Zealand

- Hassan Hussein, TIB - Leibniz Information Centre for Science and Technology and University Library, Hannover, Germany
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- Enrico Motta, KMi, The Open University, Milton Keynes, UK
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Support

Declaration on Generative AI

During the preparation of this work, the authors used Generative AI (TIB AIssistant[2]) [8] to improve the clarity of the text. All content was reviewed by the authors, who take full responsibility for the accuracy of the final version.

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