



# Supporting researchers in the publication process with open, algorithm-based tools

MaRDI Minisymposium “Towards a digital infrastructure for mathematical research“

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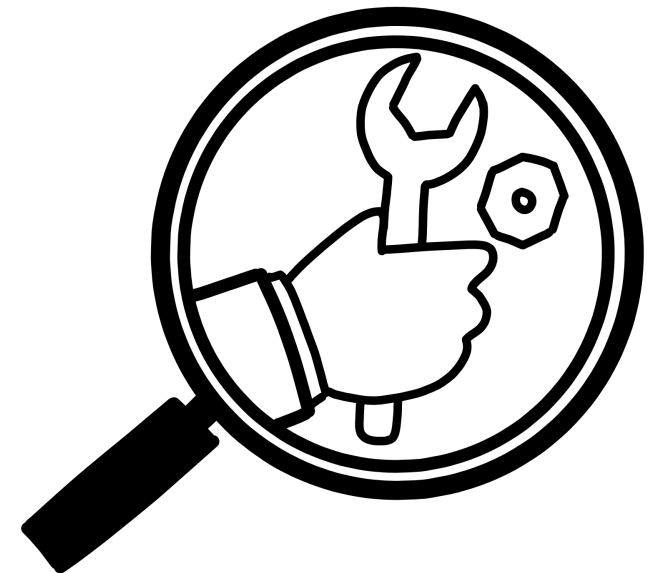
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# 1. TIB's support for community-led publishing

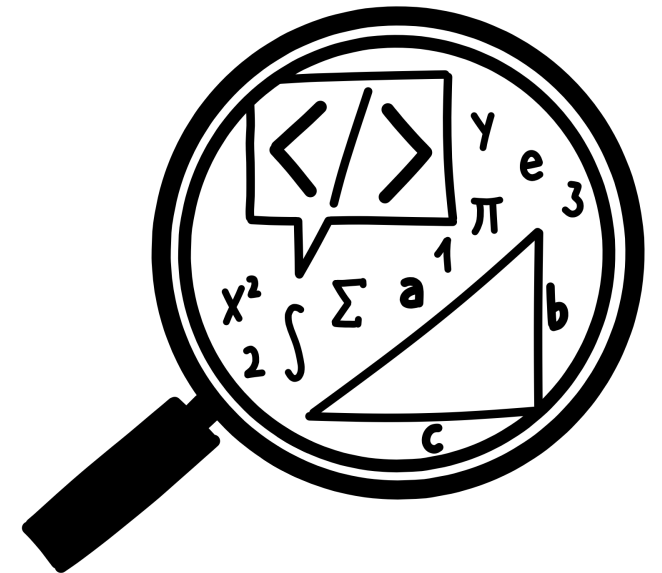
- Infrastructure

- Open Journal System hosting and development ([TIB Open Publishing](#), [PKP development partner](#))
- Repository for science and technology ([Renate](#))
- Scientific video platform ([TIB AV-Portal](#))
- [B!SON](#) – open access journal recommender



# 1. TIB's support for community-led publishing

- Sustainable financing for OA beyond output-based models
  - Journals (establishing standards and actual consortia via [KOALA](#))
  - Infrastructures (e.g. arXiv)
- Publication funds
- Information on OA, e.g. [open-access.network](#)



# B!SON

2. B!SON – open access journal recommender

# Use case, functional principle

✓ semantic



✓ bibliometric



# B

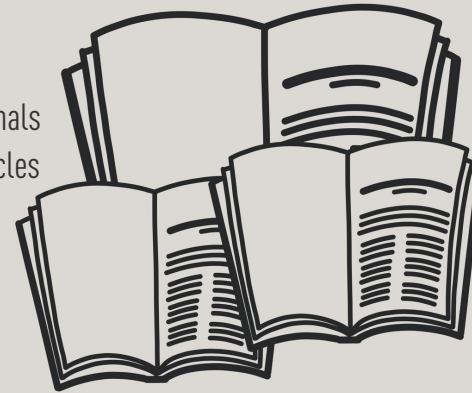
Input:

- Title
- Abstract
- References



Output:

- Ranked list of OA journals
- Similarity score & articles



Data sources:

- Article and journal metadata by DOAJ
- COCI DOI-to-DOI citation index by OpenCitations
- Journal Checker Tool by cOAlition S

# Principles of development

open source



free of charge

no usage tracking

publisher-independent

based on open, community-curated data sources



B!SON helps you to find a suitable Open Access journal for your publication by leveraging semantic and bibliometric methods. Simply enter the details of your manuscript below or [fetch the details of a paper via its DOI or arXiv ID](#). It is not necessary to provide all fields. The journal information is provided by the Directory of Open Access Journals (DOAJ). We cannot guarantee the correctness and details (like costs) should be checked on the journal homepage before submitting.

#### Title

#### Abstract

#### References ?



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#### Title

ORCID-linked labeled data for evaluating author name disambiguation at scale

#### Abstract

How can we evaluate the performance of a disambiguation method implemented on big bibliographic data? This study suggests that the open researcher profile system, ORCID, can be used as an authority source to label name instances at scale. This study demonstrates the potential by evaluating the disambiguation performances of Author-ity2009 (which algorithmically disambiguates author names in MEDLINE) using 3 million name instances that are automatically labeled through linkage to 5 million ORCID researcher profiles. Results show that although ORCID-linked labeled data do not effectively represent the population of name

#### References ?

10.1002/asi.23329  
10.1002/asi.21363  
10.1002/asi.21460  
10.1371/journal.pone.0070299  
10.1145/2350036.2350040

Search

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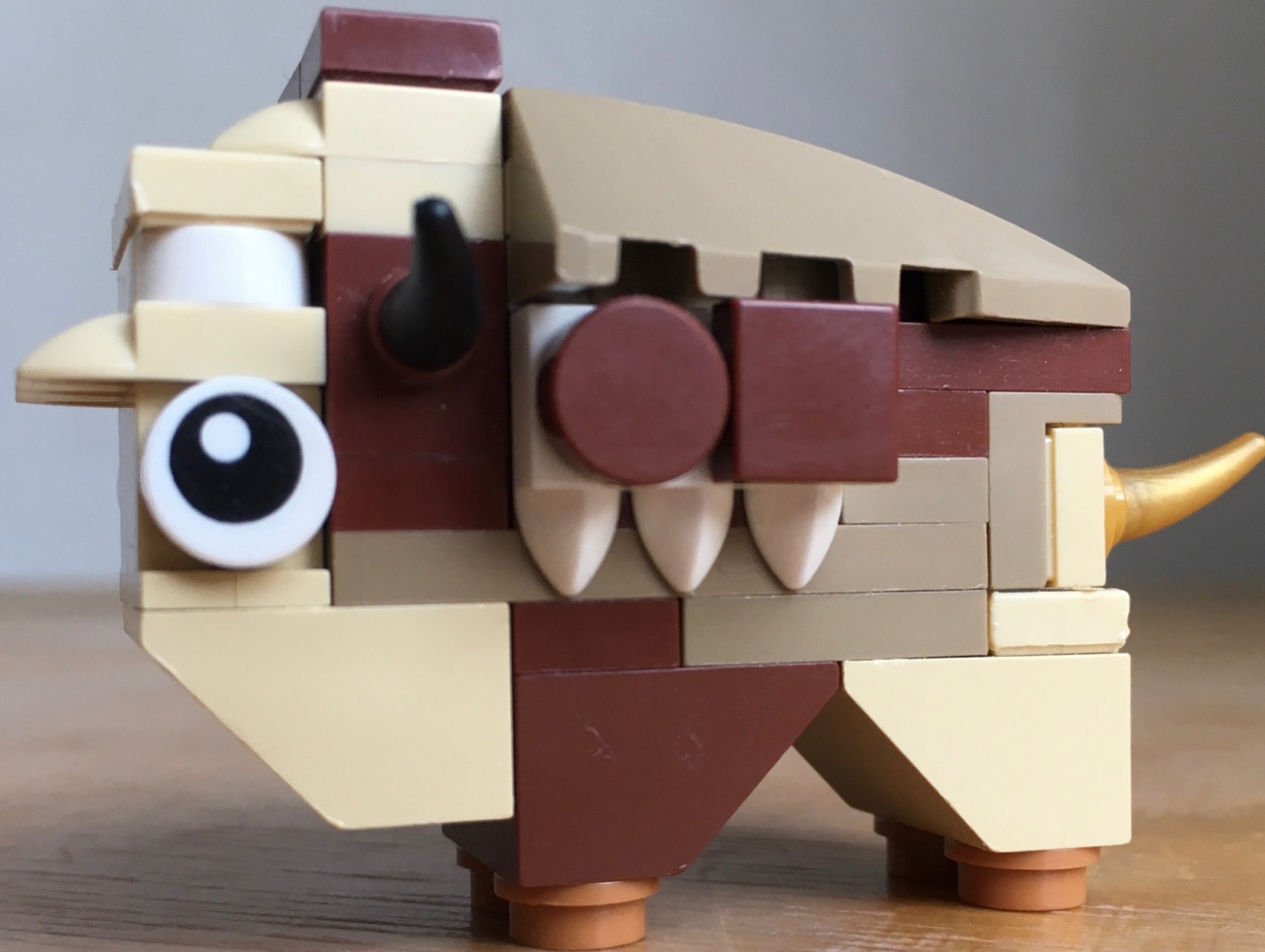




# Findings, challenges

- Technology:
  - Quality / up-to-dateness / completeness of data sources
  - Finetuning of algorithm:
    - Thresholds for bibliometric and semantic procedures
    - Normalisation of bibliometric procedures
    - Weighting of similarity measures for title/abstract/references
- Awareness among researchers (int'l)
- Funding as crucial barrier for OA
  - Existing solutions are institution-specific  
→ **institution-specifically customized B!SONs** ✓
- **B!SON as a basic technology:** other use cases, other data sources ...

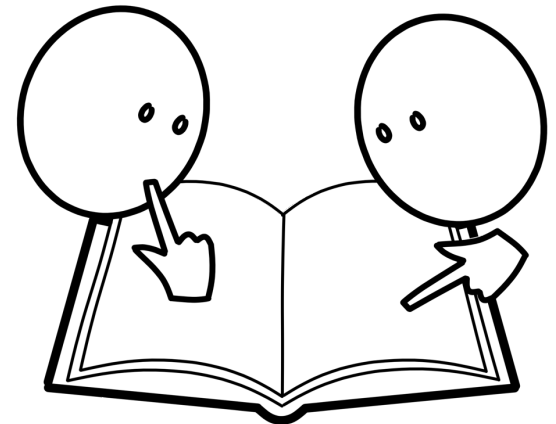




3. Next up: a WISENT!

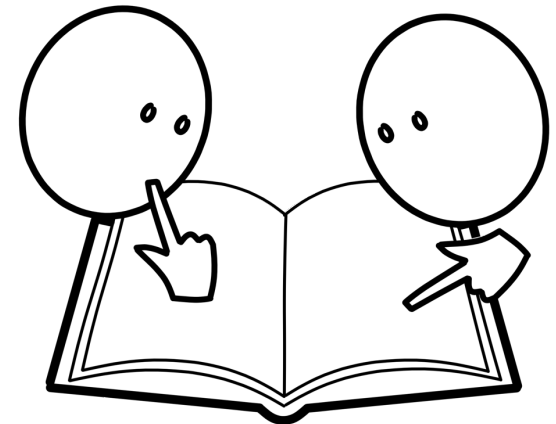
# Challenges in the academic review process

- Quality assessment as key function of academic publishing
- Ensuring subject-specific standards
- Foundation of societal trust in science



# Challenges in the academic review process

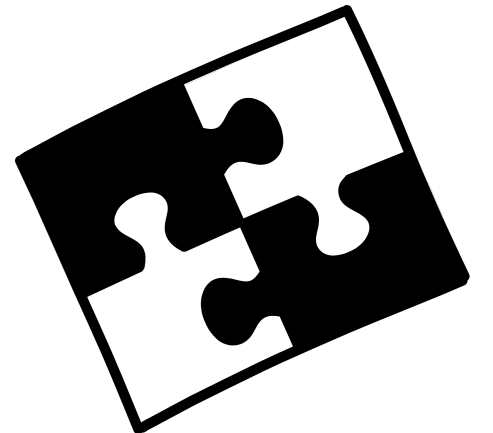
- Authors expect efficient review process; review times of less than two weeks and more than six months are considered disadvantageous (EQUAP<sup>2</sup> study)
- Review process is accelerated by publishers & sold as added value („Rapid Publication“)
- Smaller / community-owned venues lack access to resources to identify suitable reviewers



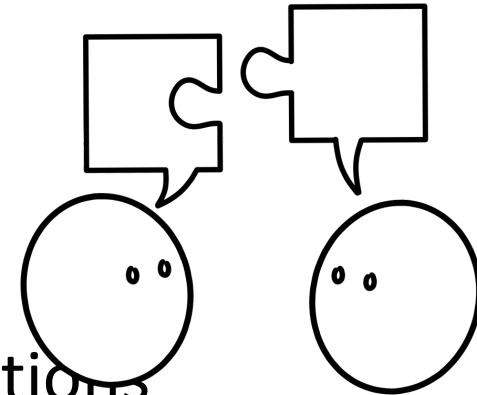
# Idea: a module for reviewer identification

- **Objective:**

- Supporting the review process through an open tool that helps identifying suitable experts for a given manuscript
- Target group: editors of journals, in particular community-based
- Standalone or plugin for open editorial systems (e.g. OJS)
- Learnings and technologies from B!SON



# Realisation of WISENT



- Data sources: Crossref and/or OpenAlex as well as OpenCitations
- Support from national and international cooperation partners: scientific institutions, open infrastructure initiatives, publishers
  - Pilot community: editors/journals in the field of statistics (via MaRDI/WIAS)
- Findings & tech. developments can be fed back to B!SON
- Partners: TIB, Leibniz University Hannover, TU Dresden, SLUB
- DFG funding under review

# Thank you!

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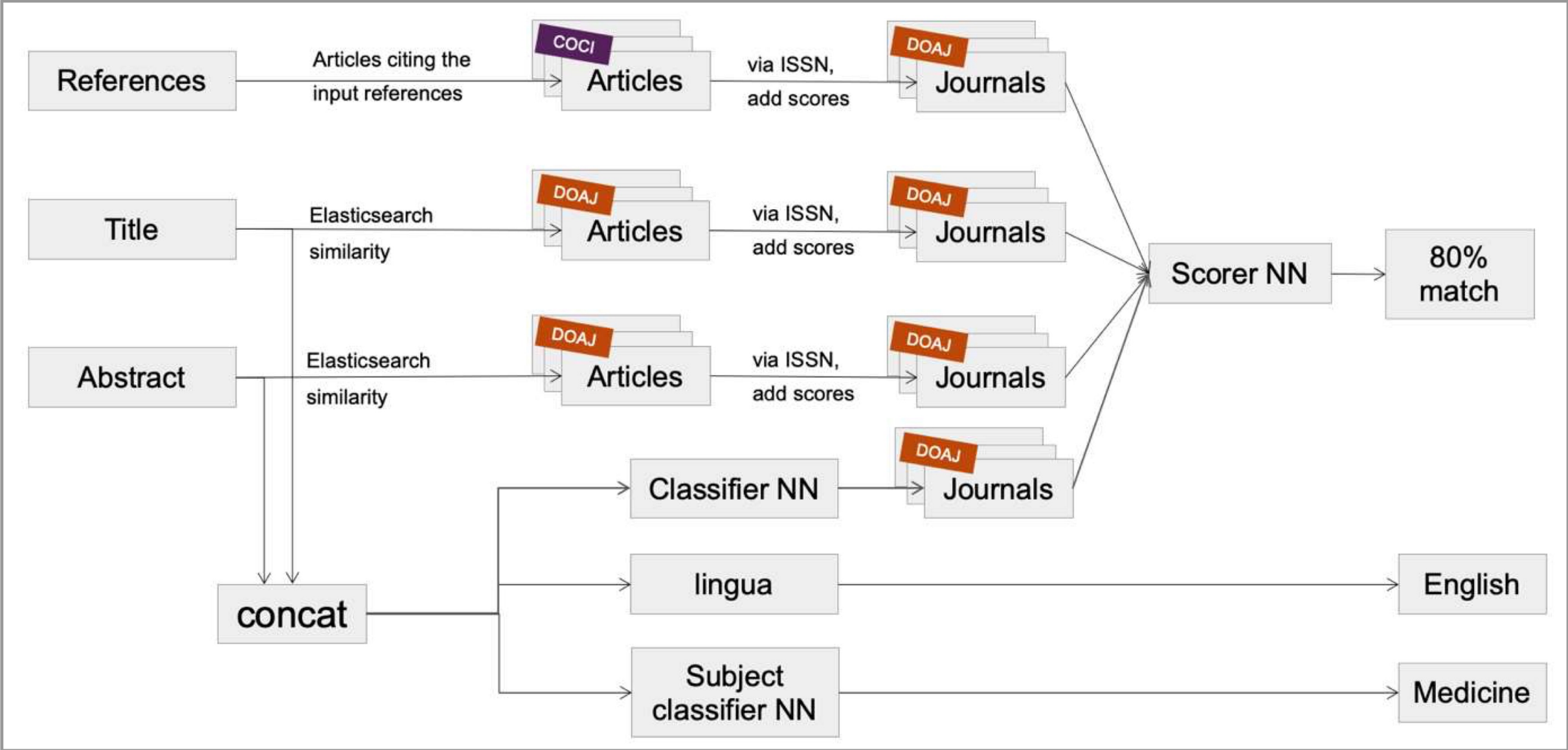
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- B!SON source code: <https://gitlab.com/TIBHannover/bison>
- Further output: <https://projects.tib.eu/bison/en/output/>
- Icons: <https://doi.org/10.5281/zenodo.5608845>, <https://doi.org/10.5281/zenodo.3674561>



# Procedures used in B!SON for journal recommendation



# Architecture of the productive system of B!SON

