

Day 1 - Breakout Session 2: (A) Talks - Publishing, Citation, and Knowledge Graphs

1. [Beyond Computational Biology: Making Code Sharing Policies Work Across Research Fields](#) by Lauren Cadwallader
2. [Leveraging DataCite DOIs for Software Citation and Reuse](#) by Maria Levchenko
3. [From Illegible to Investable: Tooling the Digital Commons for the Coming Decades](#) by Jonathan Starr
4. [Notes from the road: Reflections and findings from an examination of open source contribution culture in academia](#) by Arielle Bennett

1. **Beyond Computational Biology: Making Code Sharing Policies Work Across Research Fields**

Lauren Cadwallader, PLOS, UK

In 2021, PLOS introduced a mandatory code sharing policy for PLOS Computational Biology. Five years later, this policy was extended to PLOS Biology and PLOS Medicine, raising new challenges for disciplines that use code and software in more varied and less standardized ways.

This talk examines the work required to adapt a policy designed for computational scientists to fields with differing practices, expectations, and levels of familiarity with code sharing. It explores how researcher and editorial attitudes vary across disciplines, why defining what counts as “in-scope” code is not straightforward, and how responsibility for policy compliance is perceived by different stakeholders.

By reflecting on these challenges, the talk highlights why implementing code sharing policies is not only a technical task but also a cultural and organizational one. It will be relevant to publishers, funders, and institutions designing or implementing code and software sharing policies, and to anyone seeking to balance openness with the practical realities of diverse research communities.

2. **Leveraging DataCite DOIs for Software Citation and Reuse**

Maria Levchenko, DataCite, UK

Well-documented and accessible software is essential for reproducibility, however accurately identifying the specific version of source code associated with a given work remains a challenge. Persistent identifiers for software can help track software use and assign credit to those who develop and maintain it.

We explore how Digital Object Identifiers (DOIs) in DataCite infrastructure can support software citation, foster reuse, and improve attribution. DataCite provides open infrastructure for research organizations to create and manage DOIs and rich metadata for research outputs, resources, and activities. We examine community usage and practices across nearly 900,000 software DOIs registered by DataCite members. We demonstrate how DataCite Metadata Schema can be used to connect software and related outputs, including data, publications, models, and computational notebooks, and link software to contributors and affiliated institutions. We highlight use cases from DataCite members and offer practical examples of how assigning DOIs to software supports long-term preservation, consistent identification, and reproducibility. Finally, we discuss existing limitations, including gaps in metadata quality, and outline recommendations and opportunities for improvements.

We argue that DataCite DOIs can make software more visible, citable, and valued within the broader research ecosystem, and as such can drive a cultural shift towards recognising software as a first-class research output.

3. From Illegible to Investable: Tooling the Digital Commons for the Coming Decades *Jonathan Starr, SciOS, US*

The universe of research software (and open science) is illegible to funders. Projects pitch differently to each funder, custom assessment is rebuilt every cycle, ecosystem-essential maintainers stay invisible while well-branded projects get funded twice.

This talk presents three fixes to observability, assessment, and management.

First, cores and satellites as a structural pattern for legibility — slow, governed commons plus orbiting projects, connected through a thin shared metadata interface. Discovery and diligence happens once per core, not once per project.

Second, PRSM (live demo at prsm.network): a productionalized read/write knowledge graph connecting publications, software, people, institutions, and dependencies -- 28M+ relationships across 700+ data points. It surfaces dependencies hidden in compiled binaries, names the Research Software Champions holding ecosystems together, and answers diligence, impact, and risk questions funders of open source and open science cannot currently answer at scale.

Third, the Open Source Endowment as a working case study: a perpetual, community-governed funding instrument using PRSM-class data to inform its Value-Risk distribution model. \$750K+ committed; first distribution Q2/Q3 2026.

These three pieces are part of a larger effort to design, develop, and deploy tooling to sustain the digital infrastructure and knowledge commons across the coming decades.

Disclosure: I serve on the IRSC 2026 Program Committee; happy for the committee to apply whatever review process best preserves independence.

Live demo of PRSM (prsm.network) requires use of a computer. A pre-recorded fallback of the same walkthrough can be provided.

4. Notes from the road: Reflections and findings from an examination of open source contribution culture in academia

Arielle Bennett, Alan Turing Institute, UK

While academic researchers and research technical professionals rely heavily on open source tools and software, and open research policies increase the amount of codebases available globally, contribution patterns remain uneven, with maintenance work often undervalued within academic reward structures. The accelerating rise of genAI-driven contributions is further straining the historical open source maintenance accord.

At RSECon25, the workshop "From Code to Contributions" explored the culture around open source software contribution in academia, from first contributions to blockers, motivations, recognition, and practical strategies to improve and increase contributions from the users of scientific software back to the open source projects that underpin their research.

This talk reflects on the findings from the workshop as well as a subsequent global survey with 100+ responses exploring attitudes to open source in academia, and will invite reflections from the audience on their own perceptions towards the open source software they build, maintain, and use in their roles, and how this differs based on their global experience.