Working Group on Information
Arbeitsgruppe Information (AGI)

Uwe Kahlert
Institut für Theorie der Statistischen Physik
Sommerfeldstraße 16
52074 Aachen
kahlert@physik.rwth-aachen.de

Overview of Invited Talks and Sessions

(Lecture hall KH 0.011 and KH 0.024)

Invited Talks

AGI 1.1	Mon	16:15–16:45	KH 00.011	**Diamond Open Access: Misconceptions, Systemic Constraints, Potentials** — •Ulrich Herb
AGI 1.2	Mon	16:45–17:15	KH 00.011	**Green, Gold, Diamond, Platinum, Rhodium etc: SciPost's stance on modern publishing business models** — •Jean-Sébastien Caux
AGI 1.3	Mon	17:15–17:45	KH 00.011	**Expanding the Diamond Open Access Publishing Model: on the how's and why's** — •Margo Bargheer
AGI 3.1	Wed	13:45–14:15	KH 00.011	**Scientific publishing in the era of AI** — •Dominik Elsässer
AGI 3.2	Wed	14:15–14:35	KH 00.011	**Intelligence and the Art of Scientific Publishing - an Editor's Perspective** — •Andreas Buchleitner
AGI 3.3	Wed	14:35–15:05	KH 00.011	**Prompt or perish - the research life cycle in times of genAI** — •Sandra Geisler

Sessions

AGI 1.1–1.4	Mon	16:15–18:15	KH 00.011	**Diamond Open Access – The final step?**
AGI 2.1–2.1	Tue	11:00–11:45	KH 00.024	**Information Service for Physics**
AGI 3.1–3.4	Wed	13:45–15:45	KH 00.011	**Artificial Intelligence in Scientific Publishing (joint session AGI/AKjDPG/AKPIK)**

AGI 1: Diamond Open Access – The final step?

Time: Monday 16:15–18:15 Location: KH 00.011

Invited Talk AGI 1.1 Mon 16:15 KH 00.011
Diamond Open Access: Misconceptions, Systemic Constraints, Potentials — •Ulrich Herb — Saarland University, Saarbrücken

Open Access has expanded considerably: in 2024, about 50% of articles were published openly, mostly via gold and hybrid models. Yet dissatisfaction with APC-based publishing, concerns about inequitable participation, and the limited impact of transformative agreements have shifted attention toward Diamond Open Access (DOA), where neither authors nor readers pay. Although DOA*s share doubled from 3% in 2015 to 6% in 2024, it remains marginal and has plateaued since 2021. This contribution examines misconceptions and structural blind spots. DOA is often treated as a coherent model*scholar-led, non-profit, free of charge*although these traits do not necessarily coincide. Journals and publishers still act as key quality signals; despite reform efforts, prestige remains decisive, limiting uptake of new or low-visibility DOA venues. The idea that DOA is inherently cheaper is also misleading: studies and practice show substantial costs for editorial work, infrastructure, compliance, quality assurance, coordination, and scaling*often underestimated in non-profit settings. Sustainability concerns add to this. While niche and community-driven models show that DOA can succeed under specific disciplinary conditions, such cases rarely scale, raising questions about DOA*s capacity to drive broader transformation. The talk argues that DOA is valuable but no panacea; without realistic assessments of costs, incentives, and governance, the risk of renewed cycles of hype and disillusionment remains.

Invited Talk AGI 1.2 Mon 16:45 KH 00.011
Green, Gold, Diamond, Platinum, Rhodium etc: SciPost's stance on modern publishing business models — •Jean-Sébastien Caux — Institute of Physics, University of Amsterdam

Scientific publishing is currently undergoing a vast transition away from traditional models based on subscriptions to journals from corporate or scientific society-led publishers. Instead, a new ecology of Green, Gold, Diamond, Platinum/Palladium has sprung up from a variety of service providers, dressed in sometimes (deliberately?) obscure business practices. Confusion is rife as to whose interests are being served, and who pays the price.

Within this context, SciPost aims to provide a community-driven solution which puts scientific quality back at the forefront, and offers an alternative business model achieving significant cost slashing and aiming to deprecate profit-making in the publishing industry.

This talk will deliver an update on the current status of the reform of publishing in general, and SciPost in particular. It will also share thoughts on experiences gained, and provide perspectives for a successful transition to a healthier scientific publishing future both for scientists and the academic institutions who support and employ them.

Invited Talk AGI 1.3 Mon 17:15 KH 00.011
Expanding the Diamond Open Access Publishing Model: on the how's and why's — •Margo Bargheer — Niedersächsische Staats- und Universitätsbibliothek Göttingen

While the beneficial aspect of open access, more scientific content freely available for everyone, goes without a doubt, the extractive model of commercially provided open access calls for action. Transformative agreements seem to work too slowly, article processing charges cause budget problems and new injustice. Diamond Open Access as the publishing model without fees for reading or publishing has gained significant traction in the last years. Mostly institutionally provided or community-led with light-weight technology and infrastructures, Diamond Open Access is charged with the expectation to bring a better, fairer and more inclusive system of scholarly communication than the one offered by profit-oriented publishers. The presentation will offer some trends on the growth of Diamond Open Access and show pathways for scientific communities to promote stable and organic growth of Diamond Open Access, thereby moving towards a more self-reliant publication system that serves their disciplinary needs.

Discussion AGI 1.4 Mon 17:45 KH 00.011
Discussion — Margo Bargheer[1], Jean-Sébastien Caux[2], Ulrich Herb[3], •Uwe Kahlert[4], and Esther Tobschall[5] — [1]Niedersächsische Staats- und Universitätsbibliothek Göttingen — [2]Institute of Physics, University of Amsterdam — [3]Saarland University, Saarbrücken — [4]RWTH Aachen University — [5]TIB Hannover

Is Diamond Open Access the next and maybe final step in the transformation of the scientific publication system? What are the chances and what are potential obstacles? After the speakers have considered (Diamond) Open Access from different perspectives, these questions will now be discussed with them.

AGI 2: Information Service for Physics

Time: Tuesday 11:00–11:45 Location: KH 00.024

AGI 2.1 Tue 11:00 KH 00.024
Introducing FID Physik - a discipline-specific information service for physics — •Holger Israel[1], Esther Tobschall[1], Julia Hoffmann[1], Markus M. Becker[2], Johanna Hickmann[3], and Lina Bockhorn[1] — [1]TIB - Leibniz-Informationszentrum Technik und Naturwissenschaften und Universitätsbibliothek — [2]Leibniz-Institut für Plasmaforschung und Technologie e.V. (INP) — [3]Physikalisch-Technische Bundesanstalt (PTB)

Starting in February 2026, FID Physik, the discipline-specific information service for physics, is going to provide a free, open science -minded information portfolio tailored to meet the needs of cutting-edge physics research. Initially, to start with a well-defined specialised community, FID Physik seeks to support researchers in low-temperature plasma physics. From the outset, however, the tools and services will be designed to be broadly applicable across physics to progressively expand the target audience.

FID Physik will offer a suite of services to facilitate discovery and retrieval of relevant subject-specific information, most notably a literature search engine based on quality-curated corpus. Complementary tools include support of analysis and comparison of publications via visualisation powered by knowledge graphs and large language models (LLMs) and a consolidated conference overview. Extensive community engangement will ensure alignment with researchers' needs. Stay tuned!

FID Physik is funded by DFG under project number 558452925, via the "Discipline-Specific Information Services" programme, for an initial period of three years.

AGI 3: Artificial Intelligence in Scientific Publishing (joint session AGI/AKjDPG/AKPIK)

Time: Wednesday 13:45–15:45 Location: KH 00.011

Invited Talk AGI 3.1 Wed 13:45 KH 00.011

Scientific publishing in the era of AI — •Dominik Elsässer — TU Dortmund, Department of Physics

The dissemination of results to colleagues and to the general public has been an indispensable part of the scientific process for as long as humankind has expanded our treasure of knowledge with scientific methods. The forms and the means by which this dissemination happens have however been subject to fundamental changes over time. One such change surely was that many fields of physics have moved towards working in large and international collaborations. And a more recent, yet profound change is the emergence of AI systems, which can be used to support many steps of the publication process, but also pose new challenges. In this talk, I will present key steps of the publication process typically encountered in fundamental physics and adjacent areas, and discuss options, methods, and tools available to the publishing scientist in the era of AI, with a specific focus on modern Large Language Models (LLMs), and on systems based on LLMs. While a focus will be on publication in peer-reviewed journals, there will also be a discussion of other forms of publication.

Invited Talk AGI 3.2 Wed 14:15 KH 00.011

Intelligence and the Art of Scientific Publishing - an Editor's Perspective — •Andreas Buchleitner — Physikalisches Institut, Albert-Ludwigs-Universität Freiburg

Artificial intelligence (AI) shatters fundamental rules of the scientific publishing process. It induces a certain level of perplexity and disorientation within the academic realm, on how to react and/or to adapt - at a speed which is dictated from the outside, by a rapidly developing technology, together with the economic traction which comes with it. Different stakeholders of the publication process suggest distinct remedies, certainly guided by their respective perspectives, levels of expertise, and interests. And, clearly, there are highly nonlinear interdependencies between the thus reorganizing publication process, standards of good scientific practice, and the - in many respects highly disputable - incentives which constrain science and, in particular, academic careers. After stating some of the immediate challenges AI poses to the inner workings of the editorial process, the talk will expand upon the above interdependencies, and contemplate the genuine role and responsibility of the scientific community in shaping them.

Invited Talk AGI 3.3 Wed 14:35 KH 00.011

Prompt or perish - the research life cycle in times of genAI — •Sandra Geisler — RWTH Aachen University, Aachen, Deutschland

Large Language Models (LLMs) are rapidly reshaping how research is conducted and communicated. In this talk we will explore and spark discussions about where generative AI could or already does add value along the research life cycle, as well as the limitations and risks that must be carefully considered. From brainstorming and literature discovery to FAIR-compliant research data management, science communication and the review process, LLMs offer powerful new opportunities for researchers. At the same time, researchers face significant uncertainty, ethical concerns, and policy gaps. Drawing on recent studies and practical examples from our own research projects, this presentation highlights both the promise and the perils of an AI-assisted research life cycle.

Discussion AGI 3.4 Wed 15:05 KH 00.011

Discussion — Andreas Buchleitner[1], Dominik Elsässer[2], Sandra Geisler[3], •Uwe Kahlert[3], Simon Neuhaus[4], and •Tim Ruhe[2] — [1]Physikalisches Institut, Albert-Ludwigs-Universität Freiburg — [2]TU Dortmund, Department of Physics — [3]RWTH Aachen University — [4]Bergische Universität Wuppertal

Scientific publishing has long been said to be in crisis. "Publish or perish" is too often the prevailing motto. AI tools can now be used at almost every stage of the process. What risks and perhaps also opportunities does this development present? We will discuss this with the speakers of this session.