arXiv Annual Report 2021

About arXiv

arXiv is a curated research-sharing platform open to anyone. As a pioneer in digital open access, arXiv.org now hosts more than 2 million scholarly articles in eight subject areas, curated by our strong community of volunteer moderators who balance content quality and distribution speed. arXiv offers solutions for a broad range of services: article submission, compilation, production, retrieval, search and discovery, web distribution for human readers, and API distribution for machines, together with content curation and preservation. Our emphasis on openness, collaboration, and scholarship provide the strong foundation on which arXiv thrives.

arXiv is organized exclusively for educational and scientific purposes. It is part of Cornell University and reports organizationally to the Dean of Cornell Tech, who acts as arXiv's steward.

Mission

arXiv is an open platform where researchers can share and discover new, relevant, emerging science and establish their contribution to advancing research.

Vision

Our vision is for all researchers around the world to have immediate, free, and open access to established and emerging research in their field.

Values

- **arXiv is open**, above all. The foundation of arXiv is based on open access, transparency, open mindedness, collaboration, and flexibility.
- **arXiv is a community.** Our institutional members, collaborators, moderators, authors, and readers are not passive recipients—they are arXiv.
- **arXiv is passionate about science**—and science is for everyone.
- **We do more with less**, for the purpose of serving researchers and research.
- **We look out for each other**. To meet the challenges of the future, we are collectively passionate about our work.
- **We value excellence** within ourselves and our collaborators.

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Message from Greg Morrisett, Jack and Rilla Neafsey Dean and Vice Provost at Cornell Tech

Whenever I talk to someone in Math, Physics, or Computer Science about arXiv, they are always talking about what a wonderful, critical service it truly is. Young researchers cannot imagine a world without it, and often take its existence for granted. And when I explain arXiv to people outside of research, how it provides a forum for scientists to rapidly exchange their ideas and to make it possible for the whole world to freely access their work, they all agree that this is a fantastic service that greatly benefits society.

Of course, there's a lot of hard work that goes on behind the scenes to make arXiv function smoothly. The arXiv staff work incredibly hard to keep the service running and scaling, to move the software forward, and to work with stakeholders from around the world. The moderator community works tirelessly and is critical to ensuring that papers are correctly classified and junk is filtered. And of course, researchers all over the world are doing the real work to push science forward. I am deeply grateful to all involved.

> "When I explain arXiv to people outside of research they all agree that this is a fantastic service that greatly benefits society."

Message from Carol Hoover, MLIS, Chair of the Member Advisory Board and Digital Information Resources Manager, Los Alamos National Laboratory Research Library

While 2021 saw the second year of a worldwide pandemic, arXiv continued to prove its value to the scientific community. The role of preprints in open, fast and reliable dissemination of scholarship remained strong and arXiv continued to be the platform of choice for scientists, researchers and readers alike. In 2021, support from arXiv members continued to grow as well, including from library consortia, individual institutions, professional societies, foundations and government agencies. However, funding is still outpaced by arXiv's growth. At its core, arXiv is a community resource, one that has proven to be resilient and robust over the past year, and will continue to serve and rely on the scientific community as it moves in 2022.

> "At its core, arXiv is a community resource, one that has proven to be resilient and robust over the past year."

Message from Licia Verde, Chair of the Scientific Advisory Board and ICREA Research Professor, Universitat de Barcelona

In 2021, arXiv kept growing, and now hosts more than 2 million e-prints. The first million e-prints milestone took slightly more than 23 years to reach, but only seven more years passed before we reached 2 million. Along with the global changes to the research and dissemination ecosystem, which undoubtedly have accelerated in the past couple of years, the accelerated growth of submissions means that arXiv needs to grow, scale, and adapt. The transformation that started in 2020 progressed in 2021. We are grateful to Eleonora Presani in her role as executive director, for her commitment, her vision and for leading major initiatives in this direction.

I am confident that the coordinated efforts of staff and volunteers have positioned arXiv on solid ground to continue to make research and e-prints freely accessible to researchers and the public all around the world and to ensure that society and the research community benefit from the latest research progress and scientific knowledge.

> “The accelerated growth of submissions means that arXiv needs to grow, scale, and adapt. I am confident that the coordinated efforts of staff and volunteers have positioned arXiv on solid ground.”

Message from Steinn Sigurdsson, arXiv Scientific Director and Penn State Professor

2021 turned out to be another tumultuous year, but the arXiv staff maintained the flow of new research across multiple subject areas, free to submit and free to read, with arXiv passing 2 million total e-prints just as a new year started. The year saw the departure of arXiv's executive director, who will be sorely missed, as we search for new leadership. We look forward to what will hopefully be an exciting and fruitful new year with new opportunities and continued flow of exciting new research.

"We look forward to what will hopefully be an exciting and fruitful new year with new opportunities and continued flow of exciting new research."

arXiv connects

early career scientists around

the world with open science

arXiv in Numbers

It was a busy year at arXiv. This snapshot of numbers from 2021 begin to tell the story.

2.3 billion total downloads

5 million monthly active users

181,630 new submissions

21,000 user support tickets

15,500 submissions per month

5,415 covid research submissions

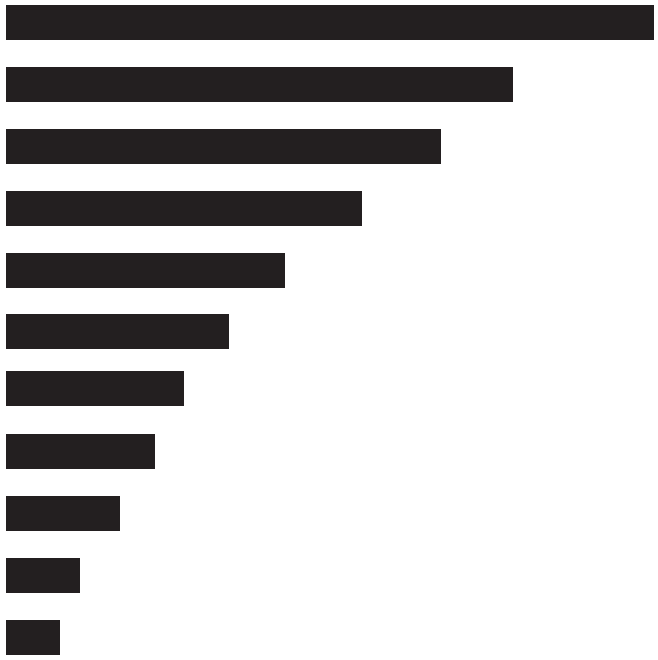
240 members

203 moderators

153 categories

26 board members

12 staff members



Most submissions in a month, ever

17,273 March 2021

An architect's rendering of the growing campus at Cornell Tech, stewards of arXiv, in NYC

A Sustainable Organization

The year 2021 was marked by growth, change, and reflection at arXiv.

COVID-related challenges continued to affect researchers as well as arXiv moderators and staff this year. We are grateful for the community's contributions, teamwork, and patience as we faced the effects of the pandemic together. Despite the challenges, major progresss was made on multiple fronts, ranging from migration to the cloud to improved moderator experience to launching a new membership program. We welcomed arXiv's first product manager and held our first multi-day, in-person all-staff meeting since the pandemic began, where we developed a sound work plan for 2022. Our major funder, the Simons Foundation, sponsored an external review of arXiv's technical needs, and a committee of board members and other stakeholders reassessed arXiv's governance model and proposed improvements for the future. The majority of our work this year was not visible to the typical arXiv author or reader – it happened "behind the scenes" and was critical to ensuring that arXiv's foundation remains strong. We also reluctantly accepted the resignation of arXiv's first executive director, Eleonora Presani, who has embarked on a new path. We concluded 2021 in a state of leadership transition, supported by our dedicated community and poised for positive change in the future.

Financial Report from Michael Weissman, Director of Finance at Cornell Tech

I am pleased to present the following financial report for arXiv, covering fiscal year 2021 actuals, and a year-to-date budget versus actuals comparison for fiscal year 2022.

Fiscal Year 2021

(July 1, 2020 - June 30, 2021)

arXiv ended fiscal year 2021 in a strong financial position - the program was able to contribute an additional $20k to reserves at the end of the fiscal year. Member contributions, gifts, and other program revenue were almost $160K over budget. Paired with a reduction in planned expenses in travel and conferences, the program was able to forgo a planned use of reserves of over $400K.

Fiscal Year 2022

(July 1, 2021 - December 31, 2022)

Combined membership receipts and outstanding receivables are well in line with the original FY22 budget, and arXiv was privileged to receive several large individual gifts in the first half of the fiscal year. Current expense trends are well within budget, and the program seems well positioned to end the year without requiring the use of programmatic reserves.

	FY21	FY22	
REVENUE	*(Actuals)*	*(Budget)*	*(Actuals, 12/21)*
Gifts and Member Contributions	$ 890,786	$ 730,000	$ 679,649
Simons Foundation Funding	$ 450,000	$ 400,000	$ 150,000
Cornell Contribution (Direct)	$ 219,130	$ 225,000	$ 163,783
Cornell Contribution (In Kind)2	$ 569,923	$ 707,827	$ 332,232
Sponsored Funding	$ -	$ -	$ 72,210
Developmental Reserve Funding1	$ -	$ 558,046	$ (158,299)
TOTAL REVENUE	$ 2,129,839	$ 2,620,873	$ 1,239,576
EXPENSES			
Personnel Expenses			
Executive and Scientific Directors	$ 348,172	$ 346,000	$ 163,260
Technical Staff	$ 573,052	$ 941,025	$ 333,845
Operational Staff	$ 285,363	$ 382,064	$ 290,368
Total Personnel Expenses	*$ 1,206,587*	*$ 1,669,089*	*$ 787,473*
Non-Personnel Expenses			
Services - Technical	$ 205,451	$ 125,197	$ 85,074
Services - Professional	$ 121,340	$ 19,776	$ 3,200
Services - Legal	$ 2,157	$ 25,750	$ 2,865
Meetings and Travel	$ -	$ 60,410	$ 5,505
Other General Expense	$ 4,798	$ 12,824	$ 13,808
Indirect Costs2	$ 569,923	$ 707,827	$ 341,651
Total Non-Personnel Expenses	*$ 903,669*	*$ 951,784*	*$ 452,103*
TOTAL EXPENSES	**$ 2,110,256**	**$ 2,620,873**	**$ 1,239,576**
TOTAL NET OPERATING	**$ 19,583**	**$ -**	**$ -**

1 Anticipated drawing of funds from developmental reserves to fund operational deficit.

2 Indirect costs covered by Cornell include those for Administration, Staff Support (Finance/Budget, HR, Facility, and Staff IT), Facilities (utility and other facility related cost for building), maintenance, custodial, utility, and other facility related costs for the building.

Our two **2021 online giving campaigns** were a resounding success. In sum, 2700 gifts collected in just two weeks, spring and fall, totaled more than $90,000 USD. Eight people gave gifts of $1000 USD.

Once again, we acknowledge that these are challenging times, and we're humbled to know that so many people worldwide were inspired to support arXiv's mission to empower researchers to share and advance scientific knowledge.

Membership Report

arXiv's members have provided approximately 30% of arXiv's operating budget for the past ten years, supporting our mission to provide a reliable open platform for sharing research. Since 2019, members have provided more than $1.6 million in support. By becoming arXiv members, more than 240 institutions around the world have made a strong statement in favor of open access, open science, and sustainable academic publishing.

This year, we announced our updated membership program, developed in collaboration with the Membership Advisory Board. This program complements arXiv's diverse funding sources, including societies and other organizations, and ensures that arXiv will have the funding required to continue meeting researchers' evolving needs.

By the end of 2021, we had received increased pledges of support for 2022, from four champion members and two champion consortia. Plus, our largest consortia contributed the next three years of support in one lump sum. More than 100 members renewed early for 2022, and the total membership commitments for 2022 exceed our target by $120,000.

The membership program contributions are now based on submissions-by-institution, as opposed to downloads. The change was made in part due to the pandemic – with so many people working from home around the world, downloads-by-institution were no longer representative of usage. At the same time, our members were asking for more detailed information regarding their researchers' submissions to arXiv. The contributions are still roughly the same as our previous rates arXiv membership, ranging from 1000 USD to 5000 USD, with the option to support at the champion level of 10,000 USD.

The **Global Sustainability Coalition for Open Science Services (SCOSS)** selected arXiv as a non-commercial service essential to Open Science and is assisting in recruiting new arXiv consortia.

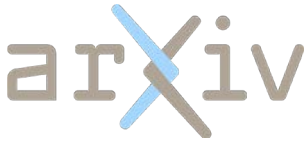
Brand and Identity Report

The past year saw further strengthening of arXiv's identity with more widespread use of our new logo. The logo was completed during an extensive Branding process in 2020, after learning that the logo in use at the time had no legal protectability. The new logo was introduced to the community in 2021 through many communication documents and 30th anniversary materials, while 2022 will see its adoption on the website itself.

Further strengthening our identity, a tagline concept has joined the arXiv family of communication elements: "arXiv Connects...". Inspired by the northstar direction conceived by our diverse brand advisory group, this flexible tagline emphasises **arXiv's unique role as an essential part of an ecosystem**, a tool that supports the intersecting goals of our diverse stakeholders.

Primary

Dark mode



Single color

Variation

Expanding our visual language

We explored further uses of intertwined elements, such as in our 30th anniversary materials.

We designed and deployed a logomark with wide uses in buttons, browser tabs, and mobile applications.

Our brand elements now include a logo for arXiv Check.

The two arms of the arXiv chi intertwine into a united symbol of **arXiv as a place of connection**. Our mark, vetted and approved by Cornell University, achieves the **legibility, memorability, and legal defensibility** arXiv needs.

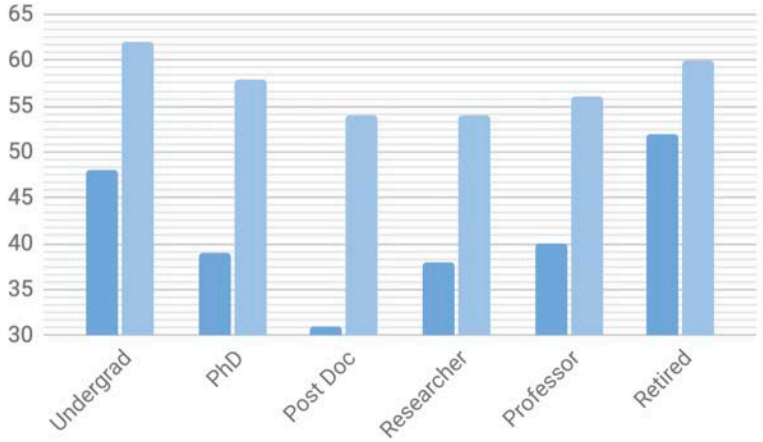
Annual Brand Perception Survey 2021

For the past two years, each Fall we have asked the community to share with us how they see arXiv. This honest annual assessment helps gauge our impact in the community and how it is changing over time. We ask community members how closely they associate arXiv with a number of aspirational attributes, and convert responses into a numerical score that we can assess year over year. In 2021, we received over 6,000 responses in 24 hours. Thank you to everyone who took the survey!

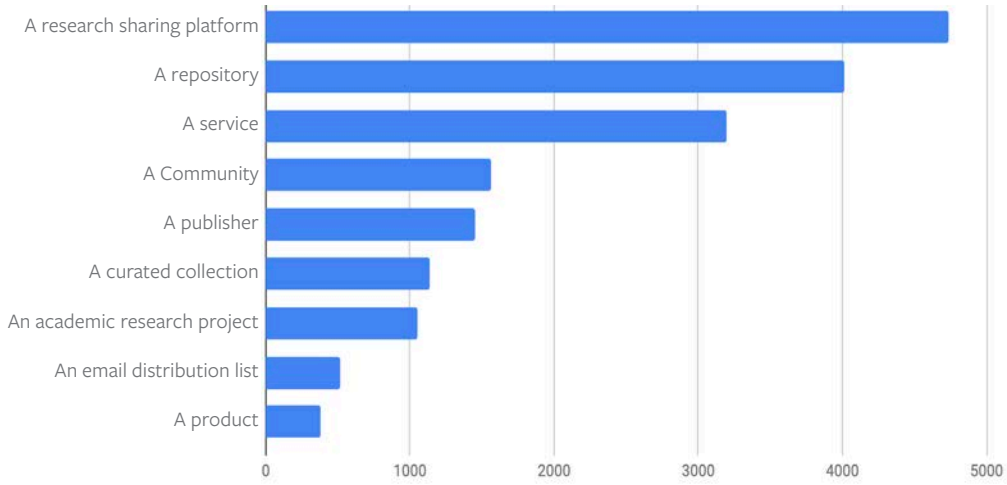
arXiv is seen as highly Open and Stable, our most important attributes and where arXiv has focused it's energies over 30 years. Areas for improvement include Innovative and Welcoming.

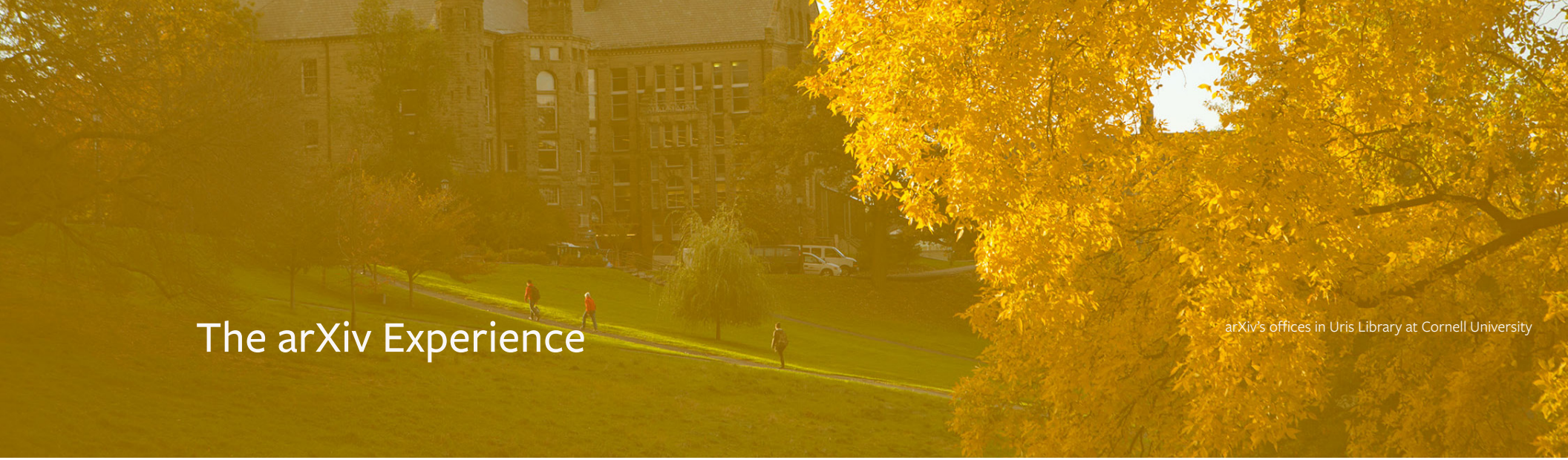
Open	Stable	Fair	Easy-to-use	Satisfying	Transparent	Trustworthy	Empowering	Welcoming	Innovative
91	83	70	70	70	69	60	58	52	40

Perception changes across career stages, scoring highest earlier and later. This pattern is seen clearly in this comparisoon chart of scores for Innovative (dark) and Empowering (light). We have a lot to learn about how arXiv can serve the community during their most research-intensive career stages.



arXiv has been described in many different ways over the years. We asked the community "What is arXiv to you, today?" Language that is more service oriented resonates with the arXiv community, while product-related language does not.





The arXiv Experience

arXiv's offices in Uris Library at Cornell University

Readers and authors who rely on arXiv expect a reliable service, and in 2021, arXiv delivered.

The platform was online and fully operable for 99.9% of the year, and few critical incidents were reported. At the same time, we strive for uptime to be 99.999% and the arXiv community has demanded more of the platform – more transparent and standardized moderation practices, a more modern and user-friendly interface, and greater interoperability with other platforms. In 2021, significant progress was made in each of these areas.

- Operational Stability
- Modernization of Services
- Content Moderation and User Support
- Moderation Workflow
- Classification of Submissions

Operational Stability

In 2021, arXiv welcomed its first product manager, **Helen Wang**, who has been working with the technical team on planning, retrospectives, and backlog management.

arXiv's excellent operational record is the accumulation of daily and sometimes heroic efforts by our software development staff. While the team continues to actively maintain the codebase and servers to maintain the same high levels of uptime, there are risks of running on premises services that require specialized knowledge. To mitigate these risks and improve operational efficiency in the long-term, arXiv is in the process of moving 100% of its services to the cloud. This major effort requires migrating existing services, as well as rewriting and modularizing remaining legacy code in modern languages.

After using AWS as its primary cloud provider for over a decade, the team decided to switch to Google Cloud Platform (GCP) to take advantage of a multi-year donation in kind–this saved arXiv $56,000 in hosting costs in the last year alone. Our developers spent time familiarizing themselves with GCP tools, in particular working on a cloud-native reimagining of arXiv's browse experience and building cloud-native quality assurance checks planned for release in 2022.

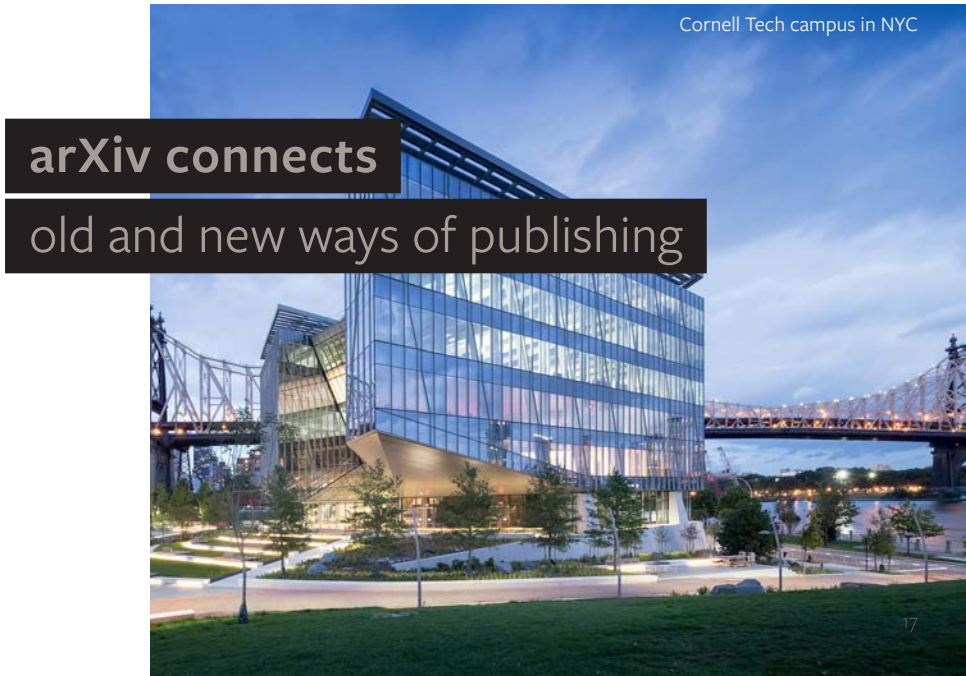
Modernization of Services

One path the team pursued in cloud modernization on GCP was building arXiv Phoenix, a cloud-native experiment in replatforming core services that showcases the new arXiv identity, branding, and accessible design principles. The approach we took in building cloud-first differed from our earlier hybrid approach, where new services were deployed alongside legacy services on on-premises servers.

arXiv Phoenix feature development is driven by user research. Future development based on author and reader feedback we collected could include simplified TeX uploads, more transparency around the submission process, improved discovery tools to find relevant research with transparent algorithms to avoid bias, and effective author name disambiguation as well as support for a wider variety of author name formats and characters.

Moving arXiv services from on-premises servers to the cloud is a priority that will help arXiv meet its long term goal of 99.999% ("five-nines") up-time.

Phoenix, built on GCP, provides a model of how we might leverage the cloud to become more flexible in deployment and minimize maintenance.



A new policy for allowing **authors to change their names** in posted articles, following the guidelines of the Committee on Publication Ethics (COPE) was initiated in March. In June we piloted changing names not only in the full text author list but also in the references to an author's own works.

Finding this to be technically feasible in most cases, **this has now become part of our standard process**. In 2021 we also partnered with a US National Labs initiative to streamline name change requests for their researchers.

Content Moderation and User Support Updates

arXiv strives to ensure that papers posted are relevant and valuable to researchers. The moderation process, with a team of 203 moderators and four staff, is critical to its operation.

To improve the moderation experience, in 2021 we updated our documentation and communications to reduce jargon and provide both greater clarity and greater flexibility to moderation decisions. To help authors better navigate the appeals process we developed a new help page detailing the appeal process expectations that guides users to provide complete appeal requests. While we do not have the resources to provide detailed feedback on the reasons for moderation decisions we continue to work for a clearer description of the process.

We have expanded the documentation on "versions" in arXiv, including many of the special cases on when we do and do not accept related content as a version of an existing arXiv identifier.

The team also rewrote the template messages we use to communicate with authors to align with the updated documentation. We also wanted to convey that there are people involved in moderation decisions and that we recognize not having a work accepted can be upsetting for authors. We want to convey that we are all trying to work in the best interests of arXiv in a process that involves human judgment and that we treat each other with respect. The new messages offer a softer tone and some greater detail while still being straightforward and clear.

In a related effort to ensure all arXiv community members are treated with respect, we expanded the arXiv Code of Conduct to include a process for reporting violations and created new documentation of enforcement options.

The arXiv Section Advisory Committees are responsible for maintaining a steady stream of high quality submissions, smooth moderation, moderator recruitment, and category organization. As the Physics section is experiencing rapid growth and pressure to add new categories, the Advisory Committee Chair, Ralph Wijers, has been coordinating with the committee, arXiv Scientific Director, and staff on increasing engagement to meet these challenges. This pilot of increasing Advisory Committee activity with staff support aims to increase moderator recruitment, expand diversity within moderators and the advisory committee, distribute effort, clarify responsibilities, and reduce the number of solo moderated categories.

To address quality concerns raised by moderators, our team added checks for concerning keywords for papers to specific categories that attract more unprofessional content. To improve metadata quality we also expanded metadata checks to catch some common errors. With an expanding number of submissions, user requests, and quality goals we also expanded the role of Cornell student workers in core arXiv operations.

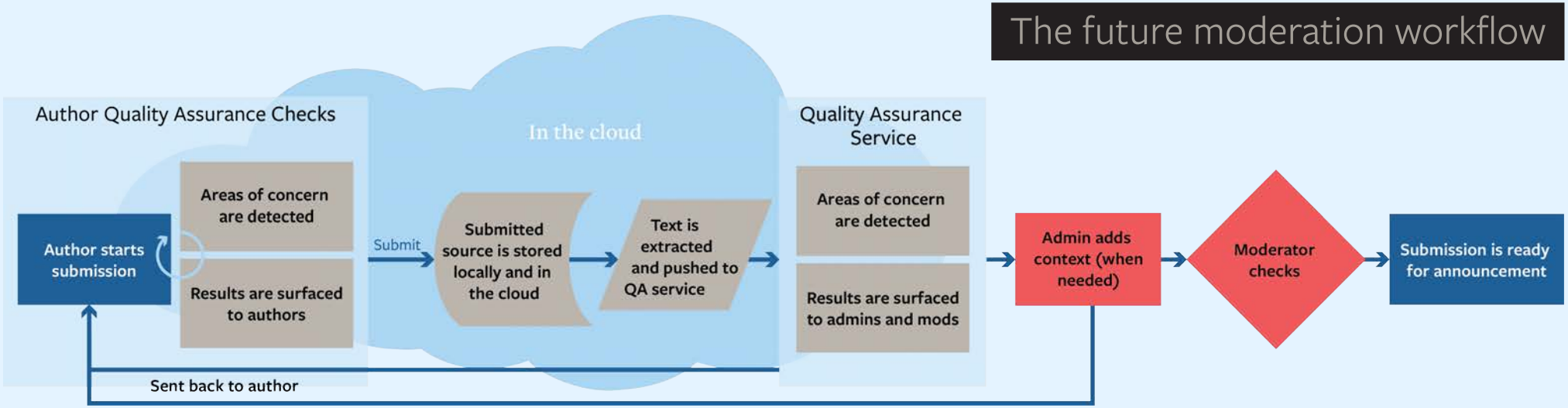
Moderation Workflow

Building on extensive user feedback from moderators, we built a new tool around their need for better collaboration, filtering, and a faster workflow. Called arXiv Check, we launched the beta version in early spring 2021. Built around moderator insights, we have ambitious plans for the future of arXiv Check including an integrated to-do list and notifications of what has changed since you last looked at your queue. The admin side of arXiv Check is also planned for 2022, so that the entire process of moderation will take place on one unified tool.

Extensive work was done on QA checks in the last two quarters of 2021 and will be extremely impactful for the moderation workflow. By front loading checks beginning at the submission process, we will filter out papers that are not yet ready for moderation. Once a paper makes it to the moderator queue it will not only be ready for a decision, it will also have gathered the context moderators need to make that decision quickly.

The arXiv CHECK Timeline

- March 2021: Closed Beta release with a representative pool of moderators for feedback.
- May 2021: Open Beta made available to all moderators, alongside existing tools.
- August: Release Candidate deployed, incorporating critical improvements.
- Next: Production Release I, featuring the top moderator requests from previous rounds of testing.



Classification of Submissions

arXiv's current content classifier, developed in collaboration with Papers with Code in 2020, is based on submission abstracts and was shown to make more accurate predictions across all categories. Analyzing the abstract text only allows for quick processing and enables near immediate category suggestions to authors. Always seeking to improve, this year we began work to compare other algorithms and approaches (e.g., full text), beginning with successfully training the current classifier algorithm (ULMFit) on full text. New algorithms rooted in scientific publications, such as SciBERT, present exciting opportunities for exploration, and we plan to complete a more comprehensive review of classifier approaches before launching the next iteration.

> "I hope that the smoother workflow will change moderation culture. We want to not be using senior professors as classification robots, but to be having rich conversations about what is going on here."

—Dr. Ralph Wijers, professor of high-energy astrophysics at the University of Amsterdam and incoming chair of arXiv's Scientific Advisory Board

arXiv in conversation

View of the Cornell clock tower and Cayuga Lake

Our core function has always been to serve as a conduit between researchers and research.

30 years ago, arXiv's technology empowered researchers to share their work freely and openly, before peer review. We all know the result: An incredible acceleration in the speed of science and an expectation for open access across disciplines.

To stay relevant and innovative, arXiv must understand how the open access movement has grown and evolved – and look ahead to the next 30 years. How can we best harness the possibilities of AI to accelerate effective research sharing? What will be the next disruption in academic publishing? What opportunities can we seize to ensure that the open access movement continues to equalize and democratize access to research?

Increasingly, arXiv is in conversation with others – both as a technical platform interacting with other services and as an organization exchanging ideas and becoming a thought leader in the open access community.

- Interoperability
- arXiv Labs
- Outreach

Interoperability

A vibrant scientific community grows with access, and interoperability is key. A robust and modern metadata model supports this work. Collaborating with CERN (the European Organization for Nuclear Research) and supported by funding from the European Research Council, arXiv convened a working group to improve the metadata model and comply with open access standards.

The legacy model served the community well over the years, with its simplicity and minimal requirements that lowered barriers to submission. However, the legacy authors field is unstructured and affiliations are often not included. There is no direct support for funding information, often a key requirement for metadata in the open access mandates. The legacy model also uses a proprietary format that is not portable.

The new metadata model addresses these issues and enhances discoverability and interoperability. New fields support ORCID for author identification, affiliation via RORs, and funder information. Better affiliation metadata will allow us, along with member institutions, to more accurately track submissions from their respective institutions. This metadata will also be shared via DOI registration with DataCite.

arXiv's interoperable future is described in the diagram on the next page. We envision an open market of research and data populated by arXiv and other repositories, while across the street enrichment services are built on top of these raw ingredients. The community moves freely among all of these services and interact with each other in a rich, self supporting pattern of communication, inspiration, and research sharing.

Thanks to arXiv's interoperable structure, Articles posted on arXiv are already discoverable across platforms like Google Scholar, Semantic Scholar, NASA's Astrophysics Data System, Europe PMC, and SciRate. Successful overlay journals have been built on top of arXiv's infrastructure.

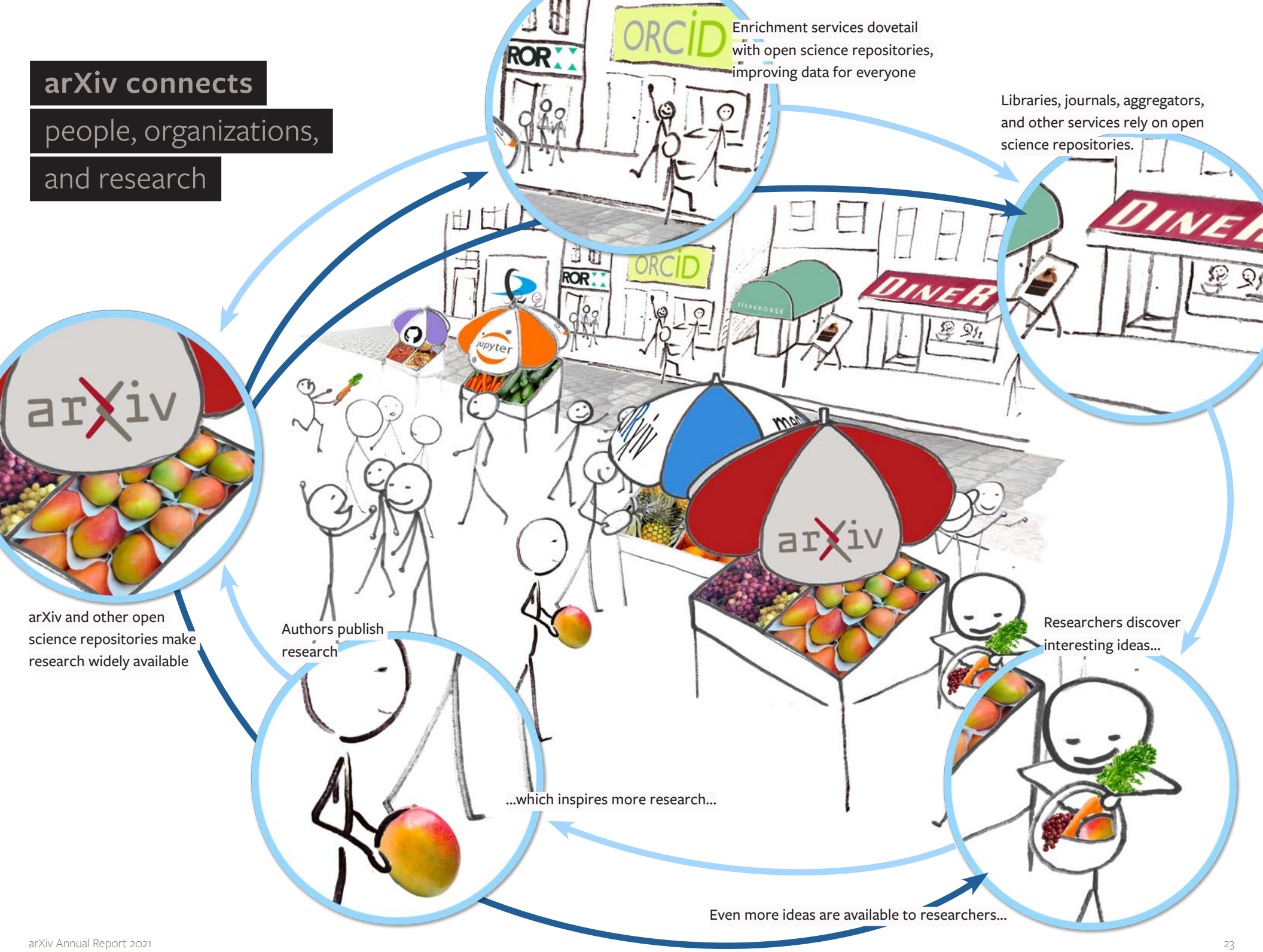
Metadata Model

We convened 13 participants from 5 institutions to revamp arXiv's metadata model and recently completed a fifth draft. The next step is to set up the crosswalk from the legacy model to the new model, across the entire corpus of 2 million articles.

arXiv connects

people, organizations,

and research



arXiv Labs

arXiv Labs continues to be a model for productive collaborations between arXiv and external groups who want to showcase their research tools directly on arXiv and povide useful tools for the community.

In the past year, we formalized the criteria for participation, transforming our labs.arxiv.org site from a simple showcase of integrations to a portal for documentation and a channel for interested parties to submit their ideas. This has allowed the project acceptance process to run more smoothly, from the ideation phase to eventual deployment.

Members of the arXiv team meet regularly to review project submissions. The successful project offers novel and useful functionality outside of arXiv's core services and competencies. Given the limited availability of development resources, we take care to anticipate any support overhead the new project might require.

Following acceptance, project proposers typically go into development mode, working with one of our open source codebases that can be tested in a sandbox environment. Following one or rounds of code review between the arXiv team and collaborators, we are able to merge the collaborators' additions into the codebase and start planning for a deployment date.

Here are a few of the new LABS integrations we introduced in the last year:

- The original **Papers with Code** integration was so well-received that we quickly expanded support from AI and Machine Learning categories to all of arXiv. In May of 2021, they introduced links to datasets. There are now over 70,000 arXiv papers that have at least one link to code, and over 60,000 that have at least one link to a dataset.
- The collaboration with Papers with Code has extended beyond arXiv Labs. Their machine learning expertise has helped us to **train models for classifying arXiv papers**.
- In February 2021, we introduced **Connected Papers**, a visual tool that helps researchers and applied scientists find and export papers that are relevant to their fields.
- In May, we added **Litmaps** to the bibliographic tools section for visualizing and navigating citations.
- Scite's **Smart Citation's** feature arrived in August. This tool shows not only how many times an article has been cited, but provides context on how it has been cited by other publications.
- There are other interesting integrations on the horizon, including **Influence Flowers**, which provides a visual metaphor for the influence profile of academic entities, including people, projects, institutions, conferences and journals.

arXiv's 30th Anniversary—Celebrating Long Term Success

In commemoration of this momentous year, arXiv celebrated despite COVID restrictions:

- We recorded 8 video conversations with the arXiv community that have received over 1,700 views.
- Friends at EPFL created a video tribute to arXiv that received 683 additional views.
- There was an outpouring of support from the community on Twitter, a wonderful reminder of the impact on the scientific community, and why we love arXiv so much.
- We opened a 30th anniversary fundraising store with limited edition merchandise, and raised over $1,500 in funds.
- In recognition of Paul Ginsparg's outstanding contributions to the democratization of research (and knowing he has little room on his shelves for more awards) we gifted him a custom arXiv 30th anniversary cycling jersey.

Outreach

In 2021, arXiv engaged in conversation with colleagues and collaborators around the world, making new connections and reinforcing steadfast relationships. Why? Because in order to serve researchers' evolving needs, arXiv must deeply understand the shifting landscape that spans open science, preprints, conventional academic publishing – and university and funder expectations.

We presented virtually at events around the world, including the National Information Standards Organization, the American Physical Society, Open Repository 21, Pidpalooza, Children's Hospital of Philadelphia, and MRI Together in addition to participating in internal events at the Simons Foundation, Google Scholar, and the Institute of Physics Publishing. We also held our first ever members-only webinar to discuss strategy and future plans.

We celebrated International Open Access week by hosting a panel discussion with UCLA and AfricArXiv and discussed "Thirty Years of Open Access: Challenges and Opportunities for Building Structural Equity."

"I'm happy to be part of this community. Here's to the next 30 years! Cheers!" @AlexanderLau17

"Hace posible que tengamos información actualizada y podamos trabajar, una idea revolucionaria y que funciona hace 30 años!!!" @ADickenstein

"Someone should say, 'Wait, then it predates the web?!?!' Indeed. It predates PDF as well." @dhpmrou

"It increases impact factor, fosters collaboration, expedites the exposure of their research, etc." @nhuntwalker

"The @arxiv has been transformative, which might actually undersell it's importance, and Joanne's work was a critical part of it's creation." @MBKplus

"Happy birthday and may you live forever!" @jeevanjyoti

30 Years of Open Science

Thank you to our supporters

Major Funding
Simons Foundation

Consortia
Big Ten Academic Alliance (BTAA), USA
Consortium arXiv-DH and HGF, Germany
Jisc, United Kingdom
National Institute of Informatics (NII), Japan
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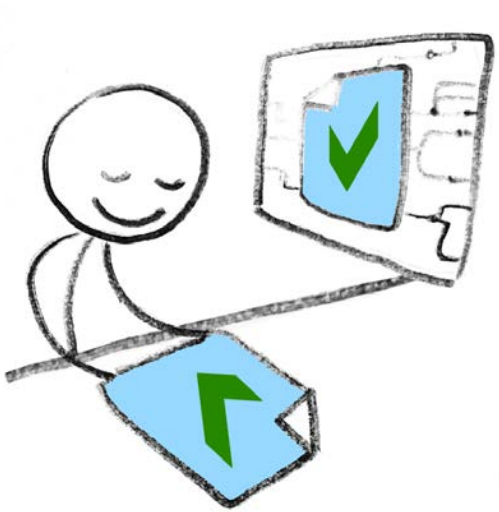

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