Scopus®
Pure

How one US university's libraries are leveraging Pure and Scopus to optimize visibility of its research

Photo by: Will Fudge, Syracuse University '23

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The Research Impact Team at Syracuse University Libraries has been leading a revolution in performance measurement on campus. Since 2020, team lead Emily Hart and her colleagues have made great strides toward improving the research reputation of Syracuse University (SU) and supporting its research enterprise. The team is aided in these efforts by digital databases and tools from multiple vendors that help it track and report on the research, scholarly and creative activities on campus. In this case study, Emily focuses on how she and her colleagues draw on the data and insights delivered by Elsevier's Pure and Scopus to meet key SU use cases, from finding discipline-appropriate metrics in support of tenure and promotion, to creating custom reports for funding proposals.

> "One of my favorite databases is Scopus and I'm a huge advocate on our campus for our research information management system Pure."

— **Emily Hart**, Liaison Librarian and Research Impact Lead at Syracuse University Libraries, USA

Background

In recognition of its high research activity, Syracuse University (SU) in New York was designated a Research 1 (R1) university in 2015 — the highest ranking awarded by the Carnegie Classification of Institutions of Higher Education. This prestigious shift in status triggered a series of changes at the university, including a rethink of the structure of the Libraries' Department of Research and Scholarship. Within the department, four new library teams were established, one of which focuses on research impact under the guidance of team lead Emily Hart. The team's four subject librarians wear multiple hats — Emily is also Liaison Librarian to the Sciences in SU's College of Arts and Sciences; Brenna Helmstutler is Librarian for the School of Information Studies; Stephanie McReynolds is Librarian for Business, Management and Entrepreneurship; and Anita Kuiken is Librarian for the David B. Falk College of Sport and Human Dynamics. "As a result, research impact is only a sliver of what we do," explains Emily.

But despite members' varied responsibilities, the Research Impact Team has been working tirelessly to develop resources and services to support SU's research goals and raise the university's profile. Emily notes: "Our approach is unique in that we've focused very hard on integrating our services into each step of the research lifecycle, ensuring they naturally fit into researchers' existing workflows."

Its activities include:

- Reporting on the university's research, scholarly and creative activities and their impact.

- Sharing support and management of the university's research information management system (RIMS). SU uses Elsevier's Pure, known on campus as Experts@Syracuse.

- Supporting the faculty tenure and promotion process.

- Creating easy-to-digest content about topics like research metrics.

- Assisting with grant discovery and systematic reviews.

Emily says: "We have a broad suite of services, but primarily it's all about supporting our researchers and the university as a whole to better understand the research that we're producing and explain why it's important."

Inspired by the example of the University of Waterloo in Ontario, Canada, the Research Impact Team has developed a series of 'use cases' designed to illustrate a deep understanding of research impact, metrics and reporting needs across campus. For example, the use cases have fostered a greater understanding of the data gathering and reporting requirements of SU's multidisciplinary research institutes. And they serve as an indication of where service development and support will be needed in the future. Emily adds: "In addition to identifying where the Libraries can offer help, and enabling us to demonstrate the value we add, the use cases can also provide leverage in conversations about new resources we may need."

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Individual
Interactions with individual faculty and/or student researchers

- Tenure and promotion planning and reporting
- Researcher profiles
- Identifying interdisciplinary journals
- Systemic review and evidence synthesis
- Open access inquiries

Groups
Interactions with academic departments and interdisciplinary institutes

- Grant compliance reporting
- Group research profiles
- Regularized activity tracking and reporting
- Equity in reporting (humanities, social sciences)
- Funding opportunity resources
- Benchmarking (future)

University
Interactions with groups like colleges, the Office of Research, and campus-wide implementation teams

- Records clean-up (Scopus/Web of Science)
- Campus systems (research information management, faculty activity reporting, ORCID)
- Intramural grant reporting
- Requests for Information/proposal
- University research rankings
- Responsible research assessment

The table shows the scope of work that the Research Impact Team performs by user group.

The team relies on a range of databases and tools to understand and report on the full breadth of work that's happening across the university, from arts and humanities to science and technology. Together, these resources give them additional coverage of the various disciplines and enable them to report more comprehensively on university activities, as well as support a number of their use cases in both their research impact and liaison roles. When it comes to science and technology, one of Emily's favorite databases is Scopus.

Here, Emily explains how seven of the most common use cases work in practice and shares some useful tips for librarians.

Use case 1: Helping SU colleges and institutes demonstrate their impact

A major focus for SU is interdisciplinary research, and over the past few years SU has opened several big centers and institutes whose research groups draw on faculty from multiple university departments and colleges; for example, the BioInspired Institute and the Aging Studies Institute. As these groups are both new and diverse, finding effective ways to track and report on their impact is complex, resulting in their faculty and research development professionals seeking the Research Impact Team's support.

Questions they ask the team include:

- What are we producing?
- What are we excelling at?
- What attention does our work receive?
- Who are our internal and external collaborators?

Emily explains: "They are interested in metrics and in setting up profiles at the group level to help them share their unique stories and broader impact. Because they are new, they don't have a way to look at their outputs and activities in a cohesive way, especially given the number of departments involved and the different processes they use to track research activities. And they may not have the resources and support staff to monitor those activities. That's where the Libraries can help."

Emily and her team use a suite of tools to support these institutes, including Scopus and Pure. "We have created custom groups for them in Pure, which allow us to track their performance, and then we use the Pure reporting module to answer questions about their research activities. One thing they often want to know is who they're collaborating with across the university and externally. Near our campus is SUNY College of Environmental Science and Forestry, and we have Upstate Medical University right across the street. Faculty from these colleges sit in our institutes and we need to be able to report on their contributions. So, in addition to using the research institute instances I've set up in Pure, I might also pull data from Scopus on those external researchers and combine the datasets."

Use case 2: Supporting the tenure and promotion process

Another big use case is helping individuals preparing for the tenure and promotion process to tell their research story using data from large literature databases like Scopus, says Emily. "There are a couple of ways we interact with these faculty, both as liaisons and as the Research Impact Team."

Option 1: Early in the process:

"If they come to us maybe a year or two before they go up for tenure and promotion, we can do things like benchmark how their publications are being received by looking at their citations in Scopus," Emily explains. "Then, based on what we find, we ask questions like have they put their preprint out and do they have an open access version of their article available? As librarians, we might also check whether they've put a copy in our institutional repository, and whether they have shared their datasets. Essentially, we are looking at how they can increase their reach so that they gain more visibility." She adds: "Reviewing and refining their researcher profiles is a part of this preparation too, as is ensuring that all their relevant publications are discoverable in large literature databases like Scopus."

Option 2: With the deadline looming

"Sometimes we get frantic faculty members who contact us a month or week before — we've even had the 'day of'," says Emily. "Having more lead time is important. We don't just pull Scopus data and hand it to them, we look at all the relevant databases and journals for their field and give them a variety of statistics and some context. For example, if we give them a metric like the journal CiteScore, we explain what it is, why it's relevant and maybe even talk about some of its benefits or limitations. It's always important to pull data from multiple sources so that we provide a comprehensive and balanced picture of performance."

One of the metrics that Emily shares with candidates is total citations for their publications. "One of the things I appreciate about Scopus is that you can pull total citations with the option to exclude self citations, so citations to their own works are removed."

Emily also looks at journal metrics. "Sometimes I'm working with faculty who are new in their field and their publications may not have had time to accumulate citations, so we highlight the impact of the journals that they've published in."

One of Emily's favorite journal metrics is SNIP (Source Normalized Impact per Paper) in Scopus, which normalizes for citation trends in a particular field. "It's a great way to contextualize that journal's performance in comparison to other journals within their discipline and across other fields," she notes. She also likes to use Scopus' CiteScore Rank and CiteScore Trend metrics, which indicate the standing or rank of a title compared to other journals in the same field. "They give you both a percentage and a number, which make comparisons easier to interpret. So, for example, in the field of psychology, I can see that a particular journal was ranked 10 out of 100. That means that journal was in the 90th percentile of successful journals in that field."

Emily and her team also look at the number of a researcher's co-authors who have a non-SU affiliation, or who work in another department/field on campus. Emily explains: "This helps the researcher to show that they are collaborative, or that their work might be interdisciplinary. I can pull this stat from Scopus, but also from Pure." She also turns to Scopus' Topics of Prominence — collections of documents with a common intellectual interest. "In some cases, these can help the researcher show the areas they are influential in, or that they are publishing in a topic area or field that is trending right now."

And she often works with alternative metrics, also known as altmetrics, which look beyond traditional publication and citation counts to consider how people are interacting with individual research outputs. "The altmetrics tool that's included in Scopus is PlumX. It can be really important for early career researchers because it shows the immediate attention their work is receiving, whereas citations take a while to accumulate. It includes things like number of downloads, how many times the article was mentioned in the news, whether their work has been picked up on Twitter, etc."

Use case 3: Providing support for funder applications and awarded grants

Securing funding is one of the first steps on the road to impact, providing researchers with the financial support they need to conduct their research. To support funding acquisition at the university level, Emily's team frequently works with units such as the Office of Research and Proposal Support Services. "Our tasks might include, for example, creating a report in Pure on university research productivity that relates to the topic of a specific Request for Information (RFI) or an external grant proposal."

The team is also regularly contacted by researchers and departments seeking grant support. On the 'front end' of the funding process, they help researchers strengthen their arguments about why they are a good match for a potential grant. This might involve a comprehensive literature search or citation management support for funding applications involving multiple departments. Emily says: "We also help people later in the process; for example, with grant tracking and compliance."

Use case 4: Understanding open access trends

An increasing number of funders require recipients of their grants to publish their research findings open access (OA) in some form. The Research Impact Team draws on data from Scopus, Pure and other tools to provide insights on OA activities at SU. These insights include:

- Where researchers are publishing — which publishers and journals they are using.

- Who is publishing OA — both departments and individuals.

- Citation rates for non-OA content versus OA content.

- Advice on complying with open access requirements.

Emily says: "Scopus tags content open access, which allows us to pull an OA dataset from Scopus into Pure and then evaluate it for a specific group to understand their open access trends. This is primarily so that we can reach out to them and have conversations about open access. It also helps us pursue things like transformative agreements — knowing where SU faculty are publishing helps us identify which publishers we should focus our outreach efforts on."

Use case 5: Ensuring the accuracy of university data

Scopus data is used in evaluations, rankings, reporting, landscape analyses and other strategic efforts worldwide. For example, the Times Higher Education World University Rankings and QS World University Rankings use Scopus datasets in their calculations, as do Scimago institutional rankings. For the Research Impact Team, making certain that SU's Scopus data is as relevant, clean and current as possible helps to ensure that the rankings accurately reflect the university's achievements and raise SU's reputation.

Emily says: "We have worked with SU's Office of Institutional Research to understand some of the differences between the rankings. The perspective that our team brings is that we have a better understanding of what Scopus is, what data Scopus holds and the limitations of the data, things like that. This collaboration supports more informed conversations around rankings on our campus going forward."

The Research Impact Team carries out an annual review and clean-up of Scopus data to ensure faculty and their publications are correctly affiliated with SU. "We also talk to faculty about their researcher profiles in Scopus, as well as in Pure, ORCID, Web of Science, Google Scholar, etc. We try to convey that even though it can be time consuming to monitor multiple profiles, it's important to check that there are no errors and that all their publications have been captured correctly. For example, when people change university or name, they can end up with duplicate profiles, which throws off their institutional affiliation, and their total publication and citation counts."

Use case 6: Benchmarking performance

Comparing the performance of a university and its departments to the achievements of peers can be a highly effectively way to understand output and impact, as well as inform future strategy. Although benchmarking is not currently a regular activity for SU's Research Impact Team, requests are starting to trickle in. For example, one of SU's colleges recently asked to map its unique research areas to specific keywords. "They wanted to understand the work they're doing in general, but also to highlight their activities in specific fields; e.g., renewable energy or activities related to the UN Sustainable Development Goals," Emily explains. "They also wanted to understand how they are performing in those areas compared to other universities. We don't yet have SciVal — it's something we'd love to get in the future — so, to respond to this inquiry, we mapped their areas of research to keywords using Scopus fields, then pulled Scopus data for our peers on the same keywords/fields to do a comparison."

Use case 7: Teaching advanced literature searching skills

Emily and her team also work with SU's researchers of the future, ensuring they have the information literacy skills they need to work effectively with impact at the forefront of their minds. Emily says: "As a liaison librarian, I mainly work with upper-level undergraduate and graduate students, teaching them how to use our resources and tools. One of the key things they learn is advanced literature searching, and Scopus is one of the primary tools I use for this. I talk about how it's structured differently than things like Google Scholar, I show them the great filters, and I talk about how preprints are now indexed at the author profile-level in Scopus, so that they can easily discover what's cutting edge in their field. I also explain what the Scopus author profiles contain, and how they can be used to find other researchers, potential collaborators or even a future advisor. Students learn about how they can follow these researchers and set up alerts so that they are notified when they publish something new."

Scopus is also one of the databases Emily uses for comprehensive literature searches when co-authoring systematic reviews, or scoping reviews with research groups and lab groups on campus.

The Research Impact Team is also working to improve the university's ability to track and report on SU's impact beyond these uses cases. For example, they are developing outreach initiatives to make people across campus aware of the importance of sharing their data and hosting unique materials publicly. "We also encourage them to ask questions of publishers like where will my publication be indexed? What are my author rights? Will there be an open access version available? Will it get a DOI?," says Emily. "All of these steps combined can make a big difference to our ability to track the impact of their work and how it's being used." The team also helps authors identify potential journals for their manuscript submissions — especially when it's a multidisciplinary publication. "Scopus is one of the tools we use to help us find those journals that cross disciplinary borders."

> "I work with the STEM disciplines and, for most of my classes, Scopus is one of the primary tools I use when teaching advanced literature searching."
>
> **— Emily Hart**

Next steps for the team include working with stakeholders across campus to continue building on existing research impact collaborations and services, and further amplify the great work being done at Syracuse University.

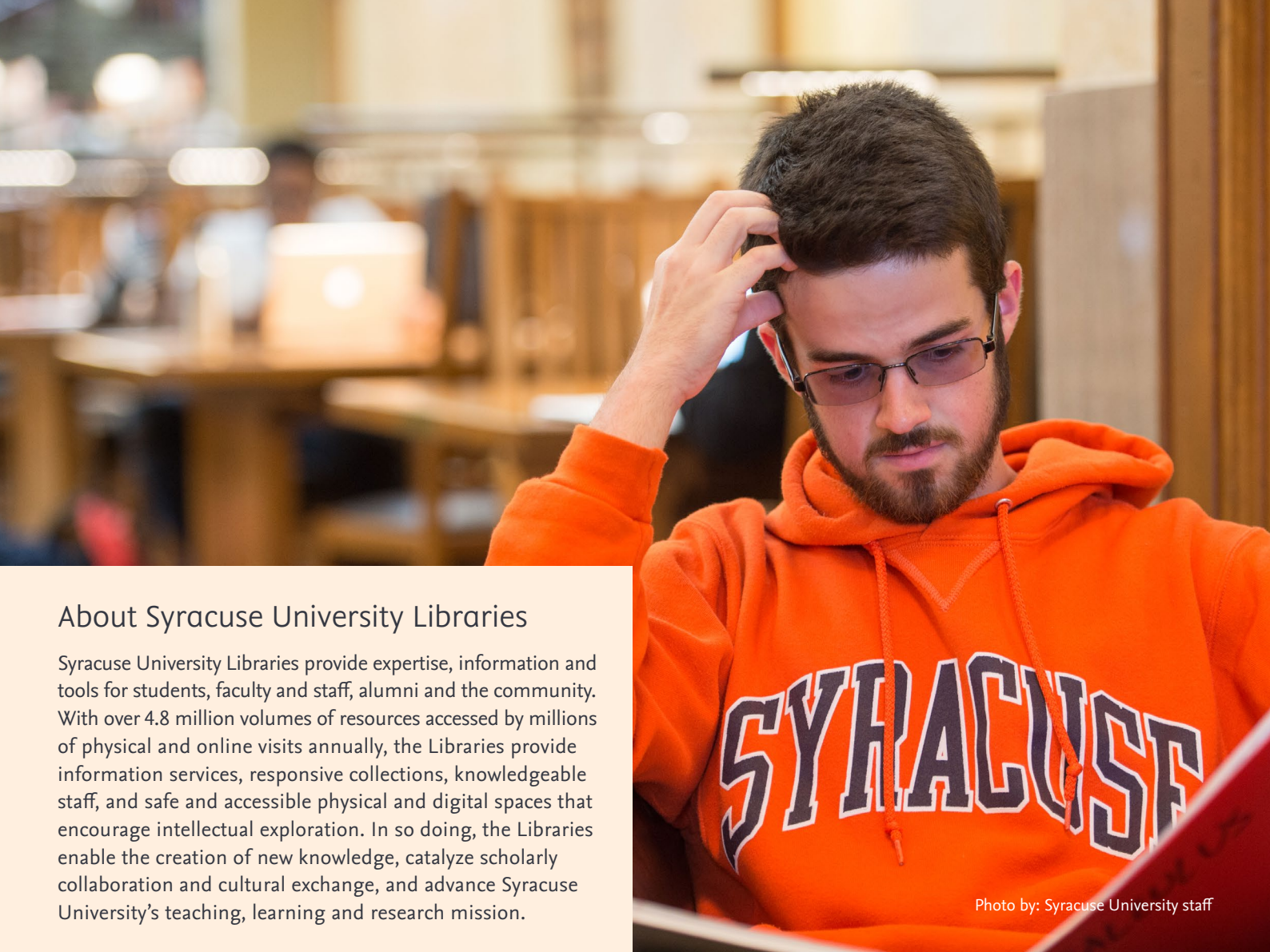## About Syracuse University Libraries

Syracuse University Libraries provide expertise, information and tools for students, faculty and staff, alumni and the community. With over 4.8 million volumes of resources accessed by millions of physical and online visits annually, the Libraries provide information services, responsive collections, knowledgeable staff, and safe and accessible physical and digital spaces that encourage intellectual exploration. In so doing, the Libraries enable the creation of new knowledge, catalyze scholarly collaboration and cultural exchange, and advance Syracuse University's teaching, learning and research mission.

About Syracuse University

Founded in 1870, Syracuse University (SU) is a private, coeducational research institution located in the heart of Central New York. Students can currently choose from more than 200 majors, 100 minors and 200 advanced degree programs across the university's 13 academic units.

SU is also home to more than 40 research centers and institutes spanning disciplines from performance, design, fine arts and humanities to information, health, social sciences and STEM (science, technology, engineering and math) fields. There is also a focus on interdisciplinary areas, including social justice, artificial intelligence, and energy and environment.

Ranked #62 among the Best National Universities and #42 for Best Undergraduate Teaching by U.S. News & World Report, Syracuse University offers many highly ranked programs and co-curricular opportunities. The university also has five award-winning study abroad centers and international programs in 60 countries, which offer students a global perspective.

There are currently around 15,000 undergraduates at SU and around 6,000 graduate students. 94 percent of graduates go on to employment, graduate school, service programs or the military within six months of graduation. And 91 percent of graduates who enter the workforce find positions related to their career goals.

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