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Mediated Deposit for IRs

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ATO Presentation

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Abstract

Institutional Repositories hold valuable research, data, learning objects, theses, and dissertations. However, convincing authors to add their works, especially published works, has been an ongoing challenge for librarians and repository managers. There are several proprietary and expensive options for ingesting content into repositories, and many libraries are unable to support those tools ethically or financially. Montana State University (MSU) has been using an open-source tool created to help authors easily and legally share their work. Shareyourpaper.org allows our authors to share the correct version of their research without needing deep knowledge of copyright or spending time searching for publishers' policies. This tool has increased the volume and efficiency of deposit into MSU's repository, increasing the impact of our research while saving librarians' time. Four years into using this tool, our library has developed systems and workflows that ingest open metadata, make research visible to our campus colleagues, collect citation data, and increase our repository deposit rates.

Introduction

Montana State University is a mid-sized public land grant institution. In my role as a scholarly communication librarian, I interact with roughly 15 faculty colleagues in the library, 600 faculty members, and 17,000 students across campus. On our STEM-focused, research-intensive campus we create a great deal of research output. The collection development policy for ScholarWorks, our institutional repository, begins, "In line with the mission of the library, *to facilitate student and faculty success by providing access to information and knowledge*, ScholarWorks will collect the scholarly works of Montana State University and provide access to those items freely." This work is rather straightforward for the theses and dissertations that are routed to library technicians through an established workflow as a degree requirement for our graduate students. However, the collection and dissemination of other research outputs is, historically, less structured. Our role in the library is to discover the published outputs from our researchers, assess their copyright and publication status, and then convince authors to send us the appropriate copy to post in ScholarWorks. Convincing authors to

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deposit their own works, especially published works, has been an ongoing challenge for librarians and repository managers (Russell & Day, 2010).

Without deep knowledge of copyright and publisher policies, it can be very confusing for authors to figure out the version of research that is legal to make open, to understand copyright statements that dictate an item's reuse, and follow publication embargos correctly (Gadd et al., 2019). To assist in this process, the MSU Library decided to "mediate" deposit, or complete as many of the tasks for researchers as we could (Zhang et al., 2015). This simplified the process for authors, yet this work can feel unsustainable for library employees who are often asked to do more with less. We had hundreds of conversations with institutional authors. These conversations helped us develop relationships with MSU faculty and led to educating the faculty about important topics, like copyright and publication standards. These conversations also provided space to share commiserations over how difficult depositing work in the IR can be, and showed the MSU faculty that we, too, struggle with the intricacies of depositing. While this work was productive and effective, it required significant copyright and publishing expertise, took a great deal of time, and much of it was repetitive. We employed some open-source tools (Sterman & Clark, 2017), yet a large portion of the copyright compliance work was still performed manually. Over the past four years the MSU Library has been using several open-source tools to manage and simplify the mediated deposit workflow. We aimed to transform this onerous process into an easier task that celebrated the research without tying up valuable research time or energy.

The Problem

Once a research object, such as a journal article, has been published, it can be difficult to get authors to deposit their work in stable repositories. The deposit of the correct version of a published article into a stable, open-access repository becomes an extra task for researchers who have already moved on to the next project. When I started pursuing research publications for repository deposit, it was hard to get researchers to deposit at all. Many authors felt that once they had produced the publication, their work was done. Open access repository deposit, a complicated and precise process, was not high on their to-do list. That has changed a bit in recent years. Authors are now more likely to already be publishing open in some capacity and are more likely to post their work on a personal web page, on an academic social media site like ResearchGate, or on an institutional platform (Piwowar et al, 2020). Authors are now, more than ever, familiar with the process and motivation of posting digital versions of papers and more socialized to the benefits of these efforts.

Collecting Metadata

While the overall goal of our process was to gather as much of our institutional research as possible, we also hoped that we could change a frustrating task into a small celebration. First, we need to know that a publication exists. We have three main avenues of citation data collection: table of contents alerts, searches for our institution in scholarly databases, and self-reporting. The first two rely on correct metadata from publishers, the third relies on a culture of sharing and celebration.

The collected citations are placed in a database that serves both as a data source and our public index of published papers (see Appendix A). The citation collection application (https://arc.lib.montana.edu/msu-research-publications/) is where we collect brief metadata for each publication (see Appendix A). This form is filled out by a combination of student workers, a staff member, and a faculty member. It is a metadata application built and maintained by our library team on an Apache server, using PHP, a MySQL database, and SELinux for security/access (A LAMP stack). We use the collected metadata for a few purposes– we send emails to our researchers, requesting a copy or permission to post an already freely available copy of their work in our IR. We send out a campus wide email reporting the month's publications, which helps celebrate publications and normalize the idea of the library as a data collection and reporting entity. And we populate the public-facing pages in the citation collection app (see Figure 1). On this page, which links from the email, each paper has a record of basic metadata that links to the published version. Departments and research groups at the University (or anyone!) can use this interface to track their publications for department pages, reporting, or on grant applications. The public-facing page also allows users to access our publications index through search or faceted sorting.

Figure 1

Screenshot of the Citation Collection Public-facing Page.

Collecting the Research

In the past, the citation information we collected would populate a spreadsheet so that a staff member could manually check the copyright and permissions of each article to find its access status and any publisher restrictions on the item (set statements, embargos, version requirements, etc.). This process took hours each month as our staff worked through the details of each paper and emailed authors with our findings. Now, the email we populate with metadata from the citation collection application can be created as a batch process. Each email includes a customized link that directs authors to a Montana State University Library page with an open source, community-controlled tool called ShareYourPaper (https://shareyourpaper.org) embedded into our branded page. This structure is intended to help researchers transfer the trust they have in our library to this version and copyright checking tool. ShareYourPaper.org is a tool developed by OA.Works in partnership with our library to make repository deposit simple. It is free, open source, community-controlled and available for set up with minimal technology support. The customized link is pre-populated with the article's DOI, and the ShareYourPaper system gathers information about the article from the journal site, Crossref, Microsoft Academic, Unpaywall, Europe PMC, and others. It checks to see the version of a paper that can legally be posted openly and then checks to see if that version is already freely available online. This information is delivered to authors in seconds. The author is then prompted through a series of screens ensuring that they make their paper as open as possible, legally. We are then sent this metadata and a copy of the correct version of the paper.

This process has decreased the time spent gathering records and depositing into the IR while increasing the percentage of papers that make it into our repository. Faculty are enthusiastic about the ease of deposit and new authors learn the system quickly. We still do not have a 100% or even 50% deposit rate, but we are working toward a more open record of our research and often have more than 25% of known research products deposited per month. The process, which took about 2 ½ days of staff time a month, now takes closer to 4 hours.

Discussion

Beyond increasing open access content, making research papers more visible and potentially more citable (Langham-Putrow et al., 2021), a secondary benefit of this process is that we are increasing good will toward the library. This process has proven to help build positive relationships and associations to the library on our campus. Researchers seem to be more likely to ask for assistance on other projects or issues once we have personal contact through the mediated deposit process. Regular contact with researchers opens lines of communication so that we are more likely to be consulted when researchers have an issue. This form of library outreach appears to have increased use of other scholarly communications services like copyright advising, OER help, and journal selection advising. We do not track these interactions specifically, however over time library staff have noticed a trend of increased referrals and requests for assistance with related services after a positive repository-based interaction.

Conclusion

Mediated repository deposit is a service that we would like to be able to offer for our authors and researchers over the long term. However, without technological assistance, the process is long and requires a detailed understanding of copyright and publishers' policies. Using a tool like ShrareYourPaper.org allows us to continue to offer this high-quality service and leaves time and effort for the other components of our work in scholarly communication and the library.

Acknowledgements

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Conflict of Interest Statement

Leila Sterman is the chair of the OA.Works Advisory Committee. She helped to develop ShareYourPaper.org through a partnership with OA.Works prior to that role. She has no financial interest in the tool.

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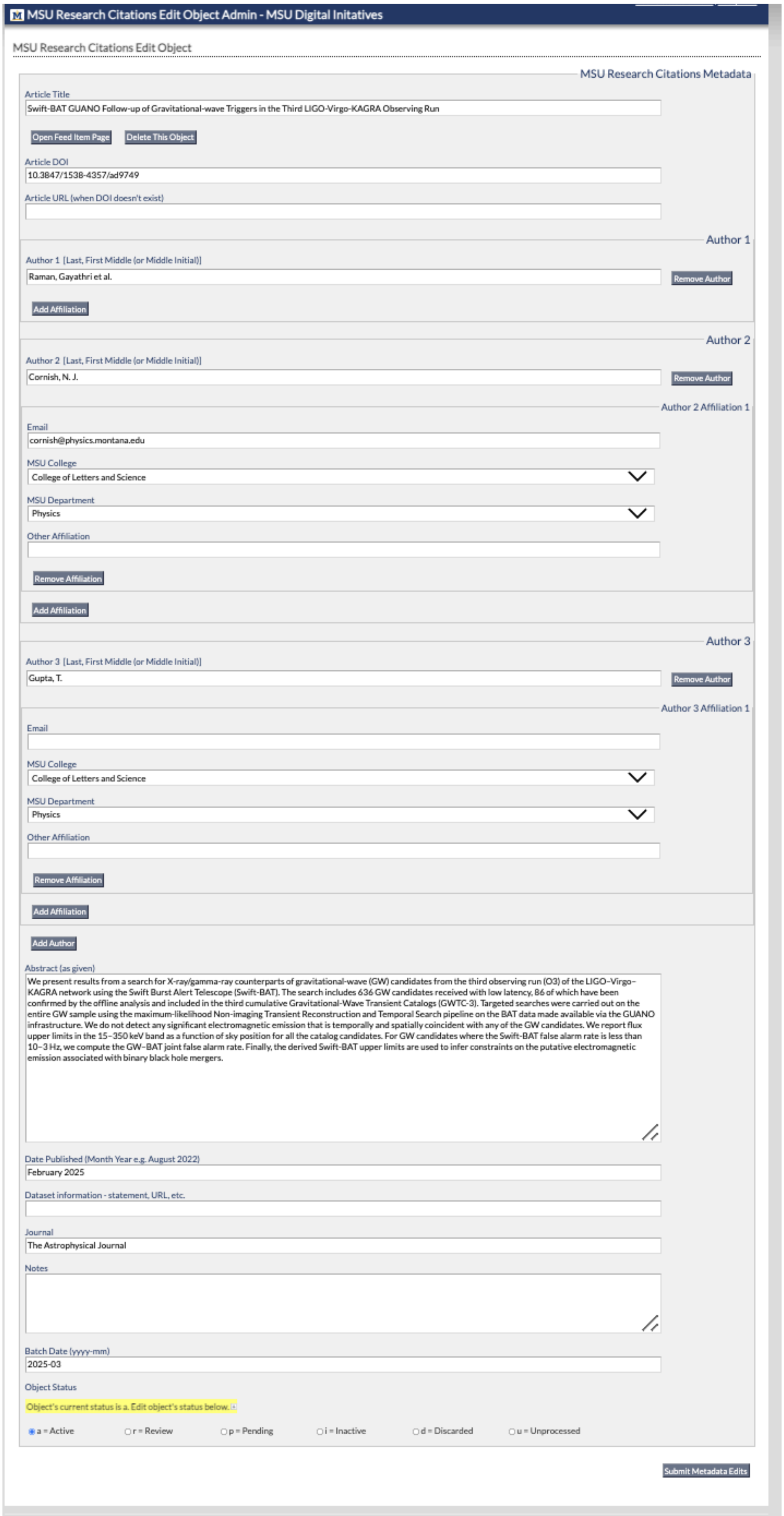
Appendix

Appendix A. *Screenshot of the Citation Collection Interface.*


MSU Research Citations Edit Object Admin - MSU Digital Initatives

MSU Research Citations Edit Object

MSU Research Citations Metadata

Article Title
Swift-BAT GUANO Follow-up of Gravitational-wave Triggers in the Third LIGO-Virgo-KAGRA Observing Run

Open Feed Item Page
Delete This Object

Article DOI
10.3847/1538-4357/ad9749

Article URL (when DOI doesn't exist)

Author 1
Author 1 [Last, First Middle (or Middle Initial)]
Raman, Gayathri et al.
Remove Author
Add Affiliation

Author 2
Author 2 [Last, First Middle (or Middle Initial)]
Cornish, N. J.
Remove Author

Author 2 Affiliation 1
Email
cornish@physics.montana.edu
MSU College
College of Letters and Science
MSU Department
Physics
Other Affiliation
Remove Affiliation
Add Affiliation

Author 3
Author 3 [Last, First Middle (or Middle Initial)]
Gupta, T.
Remove Author

Author 3 Affiliation 1
Email
MSU College
College of Letters and Science
MSU Department
Physics
Other Affiliation
Remove Affiliation
Add Affiliation
Add Author

Abstract (as given)
We present results from a search for X-ray/gamma-ray counterparts of gravitational-wave (GW) candidates from the third observing run (O3) of the LIGO–Virgo–KAGRA network using the Swift Burst Alert Telescope (Swift-BAT). The search includes 636 GW candidates received with low latency, 86 of which have been confirmed by the offline analysis and included in the third cumulative Gravitational-Wave Transient Catalogs (GWTC-3). Targeted searches were carried out on the entire GW sample using the maximum-likelihood Non-imaging Transient Reconstruction and Temporal Search pipeline on the BAT data made available via the GUANO infrastructure. We do not detect any significant electromagnetic emission that is temporally and spatially coincident with any of the GW candidates. We report flux upper limits in the 15–350 keV band as a function of sky position for all the catalog candidates. For GW candidates where the Swift-BAT false alarm rate is less than 10−3 Hz, we compute the GW–BAT joint false alarm rate. Finally, the derived Swift-BAT upper limits are used to infer constraints on the putative electromagnetic emission associated with binary black hole mergers.

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Journal
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Notes

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