# p·a·m Bulletin

### News for the Physics-Astronomy-Math Division of SLA

## Table of Contents

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The P.A.M. Bulletin is published quarterly in February, May, August, and November.

## Message from the Chair
### Chris Doty

Happy New Year from Atlanta, GA!!! It is my pleasure to serve as PAM Chair this year. It promises to be another bizarre and exciting year for PAM and SLA.

Many, many thanks to John Kromer and Kelly Durkin Ruth, who end their terms as Past Chair and Secretary. It was a pleasure to serve on the PAM Executive Board with them, and I am thankful that they will continue to serve PAM this year on other committees. In addition to guiding PAM through some pretty choppy waters in 2020, Donna Thompson has been an immense help to me, and I look forward to another year of working with her. Alison Verbeck, the greatest Treasurer who ever was, has been an excellent addition to the PAM Board. Finally, I am very excited that Lance Utley and Debal Kar have joined the 2021 PAM Board as Chair-Elect and Secretary.

The PAM Transition task force has finished its work and submitted its report to the PAM Board. Many thanks to Laura Palumbo (Chair) and the great group of individuals she organized: Kayleigh Bohemier, Sharice Collins, Leslie Eager, Samuel Hansen, Jenny Hart, Samantha Teplitzky, Donna Thompson, and Valerie Tucci. Perhaps most impressively, all of their work was completed against the backdrop of COVID. Special thanks to Kayleigh Bohemier, Sharice Collins, Leslie Eager, and Samuel Hansen, who also served on the Future of PAM task force; and Donna Thompson, who guided both of these task forces to completion. The Board continues to discuss next steps, but you can expect to hear from us soon.

Lastly, many thanks to Samuel Hansen for continuing to host the Friday water cooler chats that Jeffra Bussmann started at the beginning of COVID. Zoom links are usually posted to PAMnet.

Please don't hesitate to reach out to us if you have

## Message from the Chair
### continued

questions or comments. The PAM Board contact information is here [ https://connect.sla.org/pam/aboutus/leadership ], and the committee chairs and members are here [ https://connect.sla.org/pam/

## 2021 SLA Conference Update
### Chris Doty

The annual conference will once again be virtual this year. SLA 2021 – Destination Everywhere – will take place August 4 - 13. The deadline to submit proposals for education sessions or continuing education courses is February 15. The deadline to submit contributed paper abstracts is February 22. The deadline for poster submissions is April 26. More information is available at the SLA website [ https://www.sla.org/attend/sla-2021-annual-conference/ ].

This year's PAM roundtable moderators are Sarah Siddiqui & Mark Chalmers [Physics], Henrik Spoon & Nico Carver [Astronomy], and Samuel Hansen & Emma Moore [Mathematics]. Many thanks to all of them for volunteering!!! We also plan to have the vendor update and a few community events. More to come!!!

Dates and times of the virtual version of the Leadership Symposium will be shared when they become available.

## Astronomy Roundtable
### Nico Carver and Henrik Spoon

Our 2021 Astronomy Roundtable will feature two topics: 1. STEM-Identity Building for Girls and Women 2. The Zooniverse Citizen Science Platform.

As women continue to be underrepresented in aviation and space careers, the Smithsonian is committed to disrupting this pattern by fostering a lifelong interest in STEM for girls and young women. Margolis and Ljungren will discuss ongoing efforts to activate the Smithsonian's one-of-a-kind

collections, archives and libraries, research, and programs to inspire learners to think about their roles in defining our future in aviation and space. They will talk about their interdisciplinary collaboration around "Sally's Legacy" programming, inspired by Dr. Sally K. Ride, path-breaking American astronaut and lifelong advocate for STEM Education.
Speakers: Dr. Emily A. Margolis and Rebecca Ljungren

The Zooniverse (zooniverse.org) is the world's largest platform for online citizen science, engaging more than 2 million volunteers around the world.  From the beginning in 2007, with the launch of Galaxy Zoo, the Zooniverse has launched numerous astronomy-themed projects.  While the platform now hosts projects from a wide range of fields, including astronomy, ecology, earth science, medicine, and more, astronomy holds a special place in the Zooniverse.  Dr. Johnson will discuss the space-themed origins of the Zooniverse, highlight some of the platform's notable astrophysical successes, and look ahead to the future of people-powered astronomy research. Speaker: Dr. Cliff Johnson

It will be a live, 60 minute session with time for discussion and questions. Hope to see you there!

## Physics Roundtable
### Sarah Siddiqui and Mark Chalmers

This year's Physics Roundtable, *From Library Workshops to Physics Homework: How Jupyter Notebooks Support Students and Educators*, will bring together librarians and physicists to share stories about the power of Jupyter Notebooks as a tool for teaching, learning, and research collaboration. Jupyter Notebooks are browser-based interactive documents containing visualizations, executable code and narrative text. These hybrid documents create computational stories that can be powerful tools for teaching and learning, especially in a remote environment.

Attendees will learn about Jupyter Notebook and its place in the technological ecosystem. In addition, participants will learn how the tool might make their own technical workshops easier and how Jupyter Notebooks can solve problems physics faculty may

be facing in both educational and research settings. This will be a 60-minute live session with 3 speakers including faculty physicists and a librarian. Each speaker will present for 15 minutes leaving 10-15 minutes for Q&A. No prior experience with coding or Jupyter Notebooks is expected. If you have any questions, please contact the moderators of the roundtable, Sarah Siddiqui and Mark Chalmers.

# MathSciNet—The Value of Curation

Edward Dunne, Executive Editor, MathSciNet/Mathematical Reviews

We are grateful to the editors of the *PAM Bulletin* for the invitation to write a few paragraphs on some unique aspects of MathSciNet. They asked that we address the value of the database behind MathSciNet relative to tools such as Google Scholar, arXiv, and zbMATH. Since these tools are diverse, our goal is to highlight features that distinguish MathSciNet and features our users tell us they value.

MathSciNet is created and maintained by mathematicians, for mathematicians, through the Mathematical Reviews division of the American Mathematical Society (AMS). As a division of the AMS, Mathematical Reviews arises organically from the community it serves. We are responsive to our users because they are us.

As a preprint server, arXiv is quite different from MathSciNet. It is a useful tool for the quick dissemination of work. Submissions are lightly vetted, but not peer reviewed. It is not exhaustive since not all researchers post their papers to the arXiv. The quality of materials found on arXiv varies, with selectivity being left to users.

Google and Google Scholar emphasize quantity over curation. Search results can include a variety of items, not all peer-reviewed, inconsistently identified and labeled. Users are left to evaluate the quality and suitability of results on their own.

Direct comparison with zbMATH is not prudent. Key differences are subjective and we don't have access to their data or first-hand information about their operations. Rather than make an unfair comparison, we would like to highlight three areas of particular strength for MathSciNet:

**Standards of science and information:** MathSciNet draws on the expertise and experience of the 18 full-time, PhD mathematicians, several trained librarians and information scientists on staff, and the mathematicians in the AMS leadership. We also rely on over 23,000 researchers who are active reviewers. Sources (journals and series) and papers are selected via an editorial process, defined by an appointed oversight committee and implemented by in-house mathematicians.

We use metadata for the preliminary bibliographic identification of articles and sources, then our expert in-house catalogers provide final identification and classification, following generally accepted cataloging standards.

**Quantity and quality of reviews:** Mathematical Reviews and MathSciNet have published over 1,750,000 reviews since 1940. Each review is checked by a copy editor and two of our in-house mathematical editors before publication. The reviews add depth to MathSciNet, beyond indexing and abstracting.

**Author identification:** We are especially proud of our author identification and disambiguation efforts, which rely both on our extensive database and the skills of our trained catalogers. We also collect the affiliations of authors, which allows us to present a view of the research output of an institution. This can help students who may wish to research graduate schools for further study or employment, as well as department chairs and administrators when preparing reports about their departments.

The AMS is committed to the stability of MathSciNet and remains accountable to the mathematics community and our institutional customers to continue to provide a reliable, authoritative, and trusted resource.

For further reading:

Beyond Reviews: Inside MathSciNet [https://blogs.ams.org/beyondreviews]

A blog post about Otto Neugebauer and the founding of MR [https://www.ams.org/journals/notices/202009/rnoti-p1397.pdf]

A history of Mathematical Reviews [https://www.ams.org/publications/math-reviews/mr-history],

MathSciNet by the Numbers: https://mathscinet.ams.org/mathscinet/help/byTheNumbers.html.