

LATINX MATHEMATICIANS NETWORK

organized by

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Workshop Summary

The representation of minorities in the mathematical sciences lags behind demographic trends. Even after earning advanced degrees, many under-represented minorities often become isolated and invisible, without a strong networking infrastructure to help them progress in their professional careers. This document is a report on our recent workshop of mathematicians of the latin/hispanic diaspora who convened to discuss concrete actions to remedy this situation. Participants came from a variety of academic institutions in the USA and had ample experience in the service of the latinx/hispanic community.

Discussion and Results

Our first action was to identifying concrete problems that need to be solved in order to make positive change. Discussion began by a thorough list of all the concerns participants described, while trying to conglomerate the issues in thematic groups. The AIM methodology of voting for actions and assembling groups led us to the following five main directions for action. Each group has a committee of participants to begin working toward solutions and change.

- **Information, Communication and Dissemination of the Latinx Network:**

We concluded that it is fundamental to have a way connect and identify latinx mathematicians and their allies. Other communities (e.g., Women in Number theory) have created online databases and mailing lists that allow people to communicate and meet each other, as well as to spread relevant information (e.g., conferences, job openings, etc). We would like to create a similar website, which will contain information of members and be a place to find information. One additional benefit of this database includes the potential use by the NSF funded Mathematics Institutes who wish to search for potential applicants to their programs. It will also serve as a way to more readily find the names of latinx mathematicians who could be nominated for awards or fellowships. We decided to develop a website, the initial project will be based at UC Davis where Jesús De Loera will direct a group of advanced undergraduates to set up a version. The goal is for the site to be searchable and available so that people can register new members who can add further information to their entries (again the model we have in mind is inspired by the women in Number theory project, but we will get inspiration from NCWIT, National Council of Women in IT, AMS Blogs (e-mentoring, facebook), Database about African Diaspora). Some basic information will be public, but the entire dossier of the mathematician will only be visible with their consent. The database will generate lists by by mathematical topic, gender, type of institution, and will be searchable by math classification. We also spoke about connecting this website with existing efforts such as Lathisms website

and the new listserv. This group of participants will request financial support to the diversity initiative of the mathematics institutes to support this effort.

- **Human Development:** We need a sustainable plan to grow, expand, and support the community of young latinx mathematicians from K12 to Ph.D. For example, one question we discussed was how to develop a system of mentors and volunteers, consisting of more senior mathematicians who can give advice on jobs, grant writing, research opportunities, etc. to graduate students and postdocs? Based on these discussions below are the actions we wish to implement:

- (1) Encourage all new/finishing PhDs and post-docs apply to Project NExT;
- (2) Encourage Latinx mathematicians to participate in SACNAS Leadership Institute and in professional development/leadership sessions at national meetings;
- (3) Encourage participation (by both newer and more experienced folks) in the MAA's Early Career Mentoring Network
- (4) Determine new ways to reach out to people of color to apply more frequently to opportunities like these.

Increasing the visibility of latinx mathematicians and cultivating allies is very important. In light of this, we discussed ways in which we can get our writing and idea in Notices and other such venues, reach deans and chairs to hear why it matters to have a diverse group of faculty, etc. To be successful, we acknowledged the need for a good elevator pitch which describes why diversifying the mathematical sciences is important and why it is important to them. We propose creating posters with information. One concrete idea is to create a graphic "by the numbers" that depicts clearly what the latinx mathematics community looks like. We acknowledged the need to write more Op-eds in newspapers and letters to editors on the issue of lack of diversity.

- **Policy and Promotion of Latinx Mathematicians to the top.** We would like to see more Latinx mathematicians in the top of the profession and in leaderships roles (e.g., editorial boards, as faculty in top research schools, etc). To do so, we must identify talent and create mentoring opportunities from early career on in order to advance them to the top. For this we need a good database and network and the further development of national Leadership. This will require having more nominations of latinx to such positions, and this a need to identify letter of recommendation writers.

We are interested on creating a nominations committee for Awards and fellowships. In order to be successful, we need a efficient structure, list of deadlines, past recipients, eligibility requirements, and people to do the work. Examples to follow are MIT, Harvard, Harvey Mudd, they have people who work on nominations full-time. Determining top awards of each national mathematics organization and/or society, including MAA, SIAM, AAAS, AMS, etc, will be required. The nomination committee aims to help prepare nomination packages for these awards.

- **Building Community:** The goal of this subgroup is to stabilize and institutionalize the *LatMath* conference that has been organized at IPAM. Tatiana Toro has been a leader on this and she is trying to find a way to let it continue. The points of discussion included ways to make the conference happen regularly/frequently. Tatiana outlined what is needed and a to-do list to organize the conference and workshop participants have been identified, who are now arranging for the production of a "how to" manual

that describes what needs to be done in organizing the conference. This will include a list of what must be accomplished and will include a reasonable time line for important tasks. This manual will make it easier to “hand off” the organization of the conference to new organizing committees and assures a more smooth operation year-to-year.

In the medium term this subgroup wants to build an online community of undergraduate Latinx mathematics majors, with the added component of opportunities for face-to-face interaction at conferences such as Lat Math, Field of Dreams, SACNAS, and JMM. As part of this project, the group discussed some mentoring ideas: pair people with “buddies” (e.g. peer writing buddies, accountability buddies), pair students with mentors from within the community: faculty, industry, grad students. This work will require the need to organize ways to reach out to members of the community with important information about research opportunities, graduate school and other professional options. One possible suggestion was to replicate the model of the Math Alliance, where mathematicians volunteer to be mentors, students request mentors, but someone needs to be able to make the match.

In the longer term, this subgroup will aim to build connections to the math Ed community, through the involvement of members at the intersection (Rochelle Gutierrez, Luis Leyva). A main goal would be to understand how various pedagogies include/exclude latinx students. This work could be multipart Scholarship of Teaching and Learning (SOTL) research project on effects of different pedagogies on Latinx students.

- **Strengthening the research network of Latinx** This group discussed several possibilities to increase the research opportunities of Latinxs. The main goal is to have more Latinx mathematicians participating in hot/current research topics and/or programs organized by the Math Institutes. One initial task is to create a list of all programs by the Math Institutes and contact the Scientific boards and Diversity committees of each institute and ask them how we can get more Latinx people to participate. We have contacts at each of the institutes (e.g., both Jesús De Loera and Ulrica Wilson at ICERM) plan to look through the yearly programming and select people to personally encourage to apply. The committee can also suggest names to the Diversity Committee. In the same spirit, this group will try to ask senior Latinx mathematicians to organize some workshops at the institutes with a strong presence of Latinx mathematicians. The idea is for these mathematicians to then apply to shorter research producing programs (like SQuaREs), so they come back to the institute and keep working on research.

It is important to compile and/or create a list of resources related to research, and to make this accessible through the Resources site organized by Group 1 (Information, Communication, and Dissemination). There will be two “groups” of resources. The first is a compilation of resources that can be found on the web (e.g. NSF grants, list of journals by research area, list of math institutes with contacts, etc.). The second type is the creation of resources that cannot be found on the web currently (e.g. advice on how to apply for NSF grants, list of previous Latinx award winners (using the Database), general advice on topics people consider part of the “secret menu.” The idea is to have all of this information in one place!

One additional goal is to make the research of Latinx mathematicians more visible. For this, there is a need to get more Latinx into editorial boards of journals and invited to give research talks at top research institutions. One way to do this is by creating a committee that will contact editorial boards and suggest editors for their journals and to have those at R1 institutions invite more Latinx mathematicians. One idea is to, in the website-to-be-built, keep a list of “If you are interested in getting a job in this kind of institution (R-1, big public school, liberal arts college, etc) here are some people who might invite you,” while each year the group plans to e-mail faculty with access to colloquium / seminar invitations to propose Latinx speakers who are postdocs and early career faculty.

Final Remarks and Future Work

One topic that was very much present in the discussion is the creation of a new organization advocating for latinx mathematicians, perhaps inspired in NAM. There was a decision that this required more time to mature and that the meeting next year can bring new perspectives, depending of how much we get done by then.

We think that AIM was a great setting for this type of meeting. The focused interactive active style of workshops at AIM, really favors open discussion. The fact that the workshops was built on the concrete and important human resource problem forced us to focus and get things done. We thank AIM for all the support and help we received and look forward to the next workshop in 2019. Gracias!