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| **Position Title and Number:** | Assistant Professor in Mathematics, Geometry & Topology (https://www.mathjobs.org/jobs/list/20533) |
| **Search Committee Chair:** | David Penneys |
| **Search Committee Diversity Advocate:** | Liz Vivas |
| **Search Committee Members:** | Jingyin Huang, Hoi Nguyen, David Penneys, Hsian-Hua Tseng, Liz Vivas |

***Submit this form by email:***
*Date:* ***Must be sent prior to extending invitations to Columbus campus candidates for on-campus interviews***
*To: Divisional Dean, Divisional Dean's Assistant*
*cc: Interim Associate Dean for Diversity, Equity, Inclusion, Korie Little Edwards,* [redacted]
*Subject: Approval Request: Faculty Search Diversity Recruitment Report*

***Directions: Please provide a brief response to each question below.***

## 1. APPLICATIONS AND COMMITTEE TRAINING

- When did the search committee chair and/or members attend one of the seven "Searching for Inclusive Excellence" workshops? Was there anyone on the search committee who did not? If so, why?

Most (4/5) of the committee members attended the 10am Zoom session on September 15, 2022. The other member Hoi Nguyen attended the in-person session 1pm September 15, 2022.

- Indicate the objective of this search [e.g. hire assistant professor in the field of [x] and the time period of the "active" search [e.g. October 2022-February 2023]:

Hire an assistant professor in the field of Geometry & Topology (broadly interpreted). The period of "active search" is October 2022-February 2023

- What populations are underrepresented in your department/school? Explain.

In Mathematics, the traditionally underrepresented groups amongst the faculty consist of women, Hispanic, and Black mathematicians. On the Columbus campus, we currently have 57 tenure-track and tenured faculty. In terms of demographics, this includes 8 women (14%), 4 Hispanic (7%), and 2 Black (3.5%) mathematicians. Of these three categories, the most pressing is gender diversity.

For comparison purposes, the most recent American Mathematical Society (AMS) survey of the profession (Fall 2018) indicates that mathematics departments at the 26 large public universities have a total of 1400 tenure-track and tenured faculty. Of these, 211 are women (15.1%). The percentage increases to 16.9% at medium sized public universities, and 21.5% at small public universities. It is clear that we are behind our peer institutions in terms of gender diversity. The AMS survey of the profession does not contain data on the ethnic distribution of faculty at peer institutions.

We can also look at the workforce pipeline to get indications on trends. The most recent 2018 AMS report on new PhD recipients does include demographic data: 28.9% were awarded to women 3.6% to Hispanic students, and 2.9% to Black students. There is a well-documented "leaky pipeline" for women in mathematics, with substantial drops in the percentage of women going on to postdocs (21% according to 2014 AWM report), and a further drop in those going on to tenure-track positions at large public R1 institutions.

Thus, while we are still substantially below where we should be in terms of gender diversity, on the ethnic front we are already at or exceeding the pipeline flow. This can put us in a good position as far as recruitment of diverse candidates, as having a "critical mass" from an underrepresented group can help with recruitment (we've seen this with recruitment of Hispanic applicants to our PhD program).

In terms of the applicant pool and our November EEO report, we have also seen a larger drop in the pipeline in terms of gender (17.7% women applicants) than ethnic minorities (3.1% Black and 3.6% Hispanic applicants). This again suggests that, while we should continue to make efforts on ethnic diversity, gender diversity is the issue where the most gains can be made.

- What strategies did the search committee proactively employ to recruit faculty from underrepresented populations and diversify the applicant pool? Describe the impact of these strategies, as well as the challenges. Please be specific.

We implemented the following strategies to help diversify the applicant pool.

1. **Announcements**. Committee members announced our searches at conferences (e.g. "Hybrid: SIAM Conference on Mathematics of Data Science", "AIM conference on Higher Categories and Topological Order"), certain mailing lists ("University Quantum Series Lecture" mailing list, "Research in Undergraduate Mathematics Education" mailing list), and at some major mathematics conference centers ("Hausdorff Institute of Mathematics" in Bonn, "American Institute of Mathematics" in California).
2. **Personal Contacts**. Colleagues have been asked to let their network of contacts know about the positions. Historically, this has been our most efficient recruiting tool.
3. **Reaching out to HBCUs**. We contacted the math department chairs at the four HBCUs we have relations with (Spelman, Howard, Morehouse, Florida A&M), and asked them to share our job advertisement with anyone who might be interested.
4. **Professional Societies**. We are using the job advertisement features for several math societies, including some that are diversity specific. This includes the National Alliance and the National Association of Mathematicians (both for African-Americans), the Association for Women in Mathematics, and the Society for Industrial and Applied Mathematics (for folks who might have taken a break from academia to work in the private sector).
5. **Resume Banks**. We've also been looking through some of the resume databases, including SACNAS, Association for Women in Science (AWIS), Advancing Indigenous People in Stem (AISES).

From October to November, our EEO report indicates a 50% increase in the number of Black applicants (from 9 to 14), and a doubling of Hispanic applicants (from 8 to 16). However the overall number of applicants also increased by about 50% (from 298 to 451). So it is unclear whether the increase in Black and Hispanic applicants were due to our efforts. From October to November, the total number of women applicants increased (55 to 80), but as a percentage of the pool, decreased (18.5% to 17.8%). This likely reflects a plateau in the number of women considering tenure-track positions at an R1 university.

In the mathematical sciences, the MathJobs platform has been operating since the late 1990s, and is now essentially the only platform used by mathematics departments across the world. The MathJobs platform currently lists 1339 academic positions in the mathematical sciences for this year's job market. The likelihood of a person with a PhD in mathematics being unaware of MathJobs is essentially zero. Concretely, this means there is no "hidden pool" of diverse candidates; the only factor is whether or not they click to apply to our advertisement. So our best path towards increasing the diversity of our pool is to make sure our advertisement language is as inclusive as possible (i.e. not restricting to specific areas, ranks, etc). This was why we featured a single advertisement for our regular searches, only listing out our search areas as "preferences". This increases the likelihood that candidates on MathJobs that fall between areas would still respond to our advertisement, rather than self-exclude from applying. This also allows our search committees to identify candidates that fall between areas, and ensure they are considered for all the relevant searches – forming our long lists inclusively rather than exclusively.

- Did discussions about (i) diversity, equity and inclusion or (ii) broadening participation or related issues arise in any discussions during the search process? If so, describe the nature and outcome of such discussions.

Discussions about DEI arose numerous times the search process. In particular, each member of the search committee was required to evaluate the Diversity Statement of each candidate on our long list, and these evaluations were integral to our valuation of each candidate. Most of the time, candidates contributions to DEI were deemed adequate, but in some rare situations, candidates were completely eliminated due to concerns over their diversity statements. Some candidates were exceptional in terms of the contributions to DEI and outreach.

- Diversity statements were required by every candidate. How were the diversity statements evaluated as part of the review process?

Each member of the search committee was instructed to evaluate the diversity statement according to their own personal rubric, paying close attention to factors such as: past contributions to DEI, references to academic literature on benefits of DEI, and future plans for DEI, etc.

- Describe the applicant pool (using the EEO Report from Academic Jobs Online) from which the new hire will be selected. How satisfied are you with that pool and with its diversity? Please explain.

In the latest November EEO report, we had a total of 451 applicants. It is worth noting that, according to the 2018 AMS report on US new PhD recipients, there were a total of 364 new PhD recipients who started postdoctoral positions in 2019 (100 women, or 27.5%), and who would thus be on the job market this year. There are of course also international applicants, as well as postdocs who apply a year early (or re-apply a year late), as well as possible attrition from postdocs leaving academic for the private sector. But overall the 451 applicants we received is likely close to the total applicant pool for R1 math positions on the market this year. As was mentioned earlier, this pool includes 17.7% women, 3.6% Hispanic, and 3.1% Black. Aside from the drop in women (reflecting the well-documented “leaky pipeline”), this matches the percentage coming through the educational pipeline.

The long list the search committee identified for the position had 19 candidates, including 4 women (21%) and 1 ethnic minority (5.3%). Of the three candidates recommended for campus interviews, two are women (66%).

✓ **Faculty Search Applicant Pool – Please attach the EEO Report for the position available in Academic Jobs Online (contact your college HR Consultant if you need assistance with this). If a different application portal was used, provide a report similar to the attached sample.**

## 2. SCREENING PROCESS

- Applicant pool check-ins

| Date | Total Number of Applicants | Percent Underrepresented Sex | Percent Underrepresented Minorities |
|---|---|---|---|
| Nov. 2022 | 451 | 17.74% | 6.65% |
| Oct. 2022 | 298 | 18.46% | 5.70% |
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- Describe the screening process and criteria employed in the evaluation of applications received.

There were 2 main was that we reduced the several hundred applicants down to a list of about 20 for the long list.

1. We sorted the applicants by MSC (math subject classification) code on mathjobs, paying close attention to those MSC codes which could be considered Analysis, broadly interpreted. Examples include:
2. Faculty nominated candidates directly to the search committee. These nominations were filtered again by MSC codes.
3. Candidates who were considered as broad and whose work was related to multiple searches were first sorted by MSC codes. If a broad, strong candidate was eliminated from one search but still relevant to another search, they were added back to the pool of candidates for the other search.

On October 1, we started screening Analysis and Geometry & Topology candidates. As we obtained many hundred more applications after the first deadline of October 1, we went through the MSC codes multiple times, adding to the long list along the way.

- Complete the following table listing applicants who were *considered by the full faculty and not* chosen for a campus interview. Provide your more expansive notes of evaluation of these candidates below.

| **Applicant's Name** | **Evaluation** | **Candidate submitted diversity statement: Yes/No** |
|---|---|---|
| 1. Please see the attached spreadsheet, as the long list is ~20 candidates. | | All candidates submitted a diversity statement except when noted. |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |

## 3. PROPOSED INTERVIEW POOL

- Briefly describe the credentials of the candidates that you propose to bring as finalists to campus.

| Candidate's Name | Description of Credentials | Candidate submitted diversity statement: Yes/No |
|---|---|---|
| 1. [redacted] | Expert in field of geometry & topology, with connections to combinatorics. Many papers in prestigious journals. Held an NSF postdoc and GRFP, and currently holds an AMS Simons travel grant. Extensive teaching experience. Has extensive service and outreach contributions. | Yes |
| 2. [redacted] | Expert in many areas of geometry & topology including hyperbolic geometry, geometric group theory, and Heegard Floer homology. Has a 3 year NSF grant, and has organized many workshops. Many papers in prestigious journals. | Yes |
| 3. [redacted] | Expert in geometry & topology with many papers in top tier mathematics journals. Held a 3 year NSF grant when employed in the US as a postdoc. Has substantial teaching experience and experience serving on committees. | Yes |
| 4. | | |
| 5. | | |

- For each candidate chosen for a campus interview, briefly describe how each candidate would amplify the values of diversity, inclusion and innovation. How does the candidate's teaching, mentoring, research, and/or outreach and engagement amplify diversity and inclusion? How would the candidate contribute to ongoing or new diversity and inclusion initiatives in the unit?

| Name | Description |
|---|---|
| 1. [redacted] | While a postdoc at OSU, started Women in Mathematics Luncheon, served on departmental climate committee. As candidate was previously at OSU, her striking diversity statement points out many particular things the OSU Math Dept can work on. |
| 2. [redacted] | In her extensive experience organizing conferences, she has prioritized inviting women speakers and speakers from underrepresented groups. She is a member of the Association for Women in Mathematics (AWM) and participates in their mentorship pairing. She also mentors other more junior women in her department. She has plans to continue these things at OSU. |
| 3. [redacted] | This candidate is a first generation college student, and while at Rice as a postdoc, volunteered in the Rice Emerging Scholar Program whose mission is to help first-generation and low-income college students in STEM. He has plans to continue these efforts. |
| 4. | |

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|---|---|
| 5. | |

**OTHER NOTES:**

**PLEASE ATTACH EEO REPORT FROM ACADEMIC JOBS ONLINE**