University of Oregon AWM Chapter: Creation and Evolution

Elisa Bellah, Sarah Frei, Leanne Merrill and Kelly Pohland

Abstract We discuss the creation and development of the award-winning University of Oregon Association for Women in Mathematics Student Chapter. We give details about how we implemented our Distinguished Speaker Series and Undergraduate Reading Program, and how these programs have changed over time. We also address concerns and difficulties that our chapter encountered, and our vision for how the AWM can evolve in the future to address these difficulties.

Key words: AWM student chapter, graduate student experiences, women in math

Unbelonging is not an acute sensation; rather, it is creeping, evasive, and insidious. This feeling doesn’t always come from a particular action or event, but is part of a culture, and is therefore very difficult to change.

The story of the University of Oregon AWM Student Chapter (UO AWM) begins when its founders arrived as graduate students in 2011–2012, when all 31 of the tenured or tenure-track faculty in the UO Mathematics Department were men. The two women emerita faculty had limited departmental activities. Men taught all graduate classes and supervised all dissertations. The woman graduate student population hovered around 20% (see Table 1), and the vast majority of invited seminar speakers were men (see Table 2). It was essentially impossible to witness a woman doing research-level mathematics in the University of Oregon Mathematics Department.

In an effort to create a sense of belonging for women in our department, the UO AWM was founded in 2013 (UO AWM Student Chapter, 2020). The UO AWM is a student chapter of the Association for Women in Mathematics, a national organization whose mission is to “promote equal opportunity and the equal treatment of women and girls in the mathematical sciences, supporting individuals and institutions as we all work to make a more just and equitable community” (AWM Policies and Governance, 2020).

We — the founders and early members of the chapter — developed our award-winning Distinguished Speaker Series to create the role models we lacked in our own department. We designed visits that included a research talk for our general colloquium and a second talk either focusing on the speaker’s life as a mathematician or an undergraduate-accessible mathematics topic. We enjoyed multiple meals with speakers, walked with them around campus, provided them with an honorarium, and created opportunities for graduate student women to interact with them.

Looking back, these interactions — listening to incredible talks, eating meals together, and in one case going to a local park so that our distinguished speaker’s young children could play—are some of the most treasured experiences we had as graduate students. These visits provided an opportunity that was otherwise lacking: we could see diverse paths to research mathematics and visualize our own future as mathematicians.

Elisa Bellah
University of Oregon, Eugene, OR, e-mail: ebellah@uoregon.edu

Sarah Frei
Rice University, Houston, TX, e-mail: sarah.frei@rice.edu

Leanne Merrill
Western Oregon University, Monmouth, OR, e-mail: merrill@wou.edu

Kelly Pohland
University of Oregon, Eugene, OR, e-mail: kpohland@uoregon.edu
Beyond the Distinguished Speaker Series, the UO AWM oversaw an Undergraduate Reading Program (URP) for several years. This program paired undergraduate students with graduate student mentors who supervised readings outside the undergraduate curriculum, culminating in a poster session.

While the URP was open to all genders, our goal was to recruit women. As the URP became popular, we found that some graduate students’ only interaction with our chapter was through this program. This shifted the URP from a program designed by women graduate students interested in supporting undergraduate women to a service that a few women graduate students were providing to the entire student body. This put an inequitable burden on the graduate student women, particularly as the number of graduate women began to fall from 2015 to 2018: between these years, many women graduated or left the program, and fewer women were admitted (see Table 1).

The Undergraduate Reading Program dissolved at the end of the 2017–2018 academic year. It was replaced by a committee of graduate students that used the URP model to form a Directed Reading Program (DRP) as a service to the department outside of UO AWM (UO Math DRP, 2020; Directed Reading Program network, 2021). This program incorporated the ideas of other DRPs and introduced additional structure to the program. While the DRP still aims to recruit underserved groups into mathematics, the pressure to run this program no longer falls solely on women.

The UO AWM has three other non-scholarship arms. The K–12 Outreach Committee holds events for young women at the local children’s science museum and in schools. The Social and Professional Enrichment Committee organizes social events focused on building community and promoting wellness, such as hikes and potlucks. Our Reading Room is a library of resources for women in academia.

Past and present members of UO AWM believe our programming increased their sense of community and belonging. According to a woman graduate student, “The UO AWM has been nothing but welcoming and supportive, and I honestly don’t know if I would still be here if not for the people I met in this organization who supported me as a graduate student. I am very appreciative to have this group of people to talk to and learn from, and without them I would have felt very isolated and alone.”

The founders of the chapter are proud of these outcomes. However, upon reflection, UO AWM members believe that having graduate student women lead so many crucial department programs has had unintended negative consequences on our community.

It’s known that the people most often called to do diversity-related service in academia are the “diverse” people themselves, which can create barriers to career advancement for women and people of color (Social Sciences Feminist Network Research Interest Group, 2017; Misra, Lundquist, Holmes and Agiounavritis, 2011). In the seven years since the founding of the AWM chapter, it became clear that the UO AWM, directed primarily by a few women graduate students, was performing labor and advocacy for which the Mathematics Department itself should have been responsible.

For example, department seminars have had vastly unequal gender representation (see Table 2). However, we are not currently aware of any formal efforts to address this, such as providing financial incentives to seminar organizers to invite more women speakers. It appears that, rather than encouraging the faculty to increase the number of women seminar speakers, our department instead relied on graduate student women to do this organizing ourselves. Likewise, rather than address the lack of undergraduate mentoring, the mathematics department relied on graduate student women to work on this task for several years with no compensation.

Looking to the future, we ask: how can a single AWM chapter, and the AWM as a whole, move forward in a way that serves its members equitably? It is wonderful to have women visibly doing mathematics and helping other women along their academic journeys. But that alone isn’t enough to fix the systemic issues at work, many of which became increasingly clear throughout the growth and evolution of our AWM chapter. As a previous graduate student man, who was highly involved in our AWM chapter, puts it: “The founding generation viewed UO AWM as a vehicle for them to influence the policies and official activities of the department. As new cohorts of women came in, attracted by the strong presence of UO AWM, it became clear that the real challenge is addressing the department climate of casual sexism and sometimes flagrant harassment. While the department is still a deeply flawed place, there is, at least among the younger faculty, an acceptance of the need for change.”

Moving forward, AWM should focus on shifting the burden of gender equity in mathematics off the shoulders of women alone. We need allies in this fight, and those allies need to share this work at all levels. The women of the AWM have made tremendous progress promoting equity in mathematics for over 50 years. We believe that AWM needs to broaden its mission to include the education and recruitment of allies across the gender spectrum.

Additionally, we want to acknowledge that almost all of the women involved in the creation and continuation of the UO AWM are white and cisgendered. Women of color face immense systemic and specific issues, and trans and nonbinary folks have yet other hurdles in their path. The AWM should recognize and affirm the specific challenges faced by BIPOC women in the mathematical community, and likewise those of trans, non-binary, and non-gender-conforming
mathematicians. The challenges faced by white women in mathematics are considerably different than those faced by women of color or non-cis women. AWM needs to publicly address and respond to the challenges of intersectionality, building these ideas into the heart of their programming.

In telling the story of the UO AWM, we wish to acknowledge those who helped us. We are deeply indebted to the advice and wisdom of Marie Vitulli, who has been a valuable member of AWM’s national organization for many years, and was most recently inducted as a AWM Fellow in 2019. Marie’s knowledge was instrumental in the foundation of our chapter and guided many of our early decisions. In addition to Marie, we acknowledge many other allies, especially graduate student men and some faculty, who were and continue to be incredible resources and supporters throughout our growth. These allies did not always start out as “perfect feminists,” but many of them learned and grew through their UO AWM work. In working with these allies, and thinking deeply about issues at the intersection of feminism and mathematics, all of us — including the women — learned about our own internal misogyny and other biases.

This difficult work needs to be done by everyone in the mathematical community to see true change for women. We must all experience belonging to one mathematical community.

### Table 1 Graduate Student Demographics

<table>
<thead>
<tr>
<th>year</th>
<th>graduate students</th>
<th>first-year graduate students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total</td>
<td>% women</td>
</tr>
<tr>
<td>2010–11</td>
<td>54</td>
<td>22%</td>
</tr>
<tr>
<td>2011–12</td>
<td>56</td>
<td>20%</td>
</tr>
<tr>
<td>2012–13</td>
<td>62</td>
<td>18%</td>
</tr>
<tr>
<td>2013–14</td>
<td>61</td>
<td>18%</td>
</tr>
<tr>
<td>2014–15</td>
<td>66</td>
<td>23%</td>
</tr>
<tr>
<td>2015–16</td>
<td>61</td>
<td>26%</td>
</tr>
<tr>
<td>2016–17</td>
<td>61</td>
<td>25%</td>
</tr>
<tr>
<td>2017–18</td>
<td>67</td>
<td>18%</td>
</tr>
<tr>
<td>2018–19</td>
<td>64</td>
<td>17%</td>
</tr>
<tr>
<td>2019–20</td>
<td>73</td>
<td>22%</td>
</tr>
<tr>
<td>2020–21</td>
<td>68</td>
<td>21%</td>
</tr>
</tbody>
</table>

### Table 2 2016-2017 Seminar Speaker Demographics

<table>
<thead>
<tr>
<th>seminar</th>
<th>total seminar speakers</th>
<th>outside seminar speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total</td>
<td>% women</td>
</tr>
<tr>
<td>Algebra</td>
<td>14</td>
<td>0%</td>
</tr>
<tr>
<td>Analysis</td>
<td>9</td>
<td>11%</td>
</tr>
<tr>
<td>Colloquium</td>
<td>25</td>
<td>20%</td>
</tr>
<tr>
<td>Geometric Analysis</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Number Theory*</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td>Topology/Geometry</td>
<td>21</td>
<td>14%</td>
</tr>
</tbody>
</table>

*Note: the only tenured or tenure-track women faculty in the Mathematics Department during this year are number theorists, which may explain the relatively high percentage of women invited to this seminar.

### Acknowledgements

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References


