

IMPROVING GENDER DIVERSITY AMONG PHYSICS AND ASTRONOMY FACULTY AT MCMASTER UNIVERSITY

BY CHRISTINE WILSON



The department of Physics and Astronomy at McMaster University has made significant improvements to the gender diversity of its faculty over the past 35 years. As the second woman hired in the department, I look back at how this improvement was accomplished and at some of the successes and on-going challenges.

The first woman professor, Catherine Kallin, was hired in 1986, followed by myself in 1992. Three additional women were hired in 2000 and 2001 and a fourth in 2007. Our most recent woman professor, Miranda Schmidt, was hired as a teaching-track faculty member in 2019. Our department has made excellent use of both targeted and open hires to increase its gender diversity. The hiring of 4 of our 7 women professors was enabled by NSERC's programs to support the hiring of women and/or indigenous faculty members: myself under the Women's Faculty Award program, and Fiona McNeill, Alison Sills, and Laura Parker under the University Faculty Award (UFA) program. Cecile Fradin was hired in 2001 as a Tier 2 Canada Research Chair. McMaster's spousal hiring policy was used to help retain one of our female faculty by enabling us to hire her (male) spouse.

With Dr. Kallin's retirement in July 2020, the department currently has a total of 28 faculty members, 3 on the teaching-track and 25 on the research track. Besides the 6 women professors, other axes of diversity in the department include 6 people of colour and at least 2 identifying as LGBTQ, so that approximately half of our professors are cis white men. Cecile Fradin told me "When I chose to come to McMaster, the fact that there were so many women in the department made a big

difference. It really signaled the department as woman/minority friendly."

The research of our women professors has been recognized by a variety of internal and external awards. These include 3 Canada Research Chairs, 3 NSERC Discovery Accelerator Supplements, 2 Killam Research Fellowships, and 3 Polanyi Prizes. Catherine Kallin has held Sloan, Steacie, Guggenheim and Simons fellowships. Cecile Fradin has held two very competitive awards from CIHR. I am a fellow of the Royal Society of Canada and hold the McMaster rank of Distinguished University Professor. Laura Parker holds the rank of University Scholar.

Our women professors have also taken on academic leadership roles. Within the department, women have served as Associate Chair (graduate) four times, Associate Chair (undergraduate) twice, and Acting Department Chair once. Across the university, Fiona McNeill was Chair of Medical Physics and Applied Radiation Sciences as well as Associate Vice-President (Research). Alison Sills was Associate Dean (Undergraduate) of the Faculty of Science, and both she and Laura Parker have served as President of the McMaster University Faculty Association.

One of the challenges we face as a department is that it is significantly more difficult to hire women in research areas where their representation is lower, such as quantum condensed matter or high energy physics, than it is in areas such as astronomy/astrophysics or medical/biophysics that have a higher fraction of women nationally and internationally. In the mid-2000s we made a sustained effort over 3 years to hire a woman in experimental physics using the UFA program but were ultimately unsuccessful despite identifying excellent candidates.

As individual women professors, we deal with all the (sadly) usual problems that I expect are described elsewhere in this issue: managing dual-career families, the two-body problem, and achieving a reasonable work-life balance. We are asked to serve on many committees and are promoted as candidates for administrative positions; learning to say "No" is something I personally still struggle with. Then, there is the challenge of student

SUMMARY

Christine Wilson is an observational astronomer whose research focuses on understanding what factors control the rate at which stars form in galaxies. Her recent focus is on galaxy mergers with extremely high star formation rates using data from the Atacama Large Millimeter/submillimeter Array.

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expectations: I cannot tell you how many times I have been in the departmental office to pick up my mail, only to have an undergraduate student assume I am a secretary. I have learned that imposter syndrome actually gets worse as I become more senior.

But there continues to be progress, both in our department and across the university. In the face of increasing evidence from studies at other universities of bias against women and BIPOC

faculty, McMaster recently stopped using student course evaluations as part of determining merit awards and annual salary increases. In 2015, all women professors at McMaster were given a pay raise of \$3,515 per year to boost their base salaries in order to correct for a systematic bias that had produced a significant salary differential between men and women professors. I am hopeful that it will not take another 35 years before our department matches the diversity that we see in Canadian society more broadly.