

Melting the Glass Ceiling in Physics

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"We all need permission to do science, but for reasons that are deeply ingrained in history, this permission is more often given to men than to women."

**– Vera Rubin,
pioneering astronomer**

The words “glass ceiling” have long described the barrier preventing women and other minority populations from being promoted to top tier positions in their professions. The 1400 Degrees Initiative, which borrows its name from the typical melting temperature of glass, takes a multifaceted approach to the issue of gender equity in physics and astronomy. The Heising-Simons Foundation rolled out their 1400 Degrees website (<https://1400degrees.org/>) in June, 2021. This web-based platform is an outgrowth of the Foundation’s commitment, via grant-making and dissemination of information, to empower a diverse U.S. physics and astronomy community. In early 2022, it was recognized with an Anthem Award, at the Silver level, in the Diversity, Equity and Inclusion category. (These awards, an outgrowth of the Webby Awards, are meant for socially impactful work).

Central to the platform is the building of a highly inclusive, comprehensive “Find a scientist” directory (<https://1400degrees.org/directory/>) which is searchable by name, institution and field.

Any female or marginalized gender identity in physics or astronomy who has completed at least a bachelor’s degree is invited to register. There, one can showcase achievements, serve as a model for others, and grow one’s own collaborative network. At the time that this article is being written, 205 physical scientists are already members of the directory. Clearly, more are needed and participation is welcomed.

The 1400 Degrees site contains additional resources. Currently there are:

- Interviews with women physicists and astronomers conducted by science writer Sophia Chen.

Chen has been featured in *Wired*, *Science*, *New Scientist*, and *Physics World*, and on the well-subscribed YouTube channel, “Physics Girl”

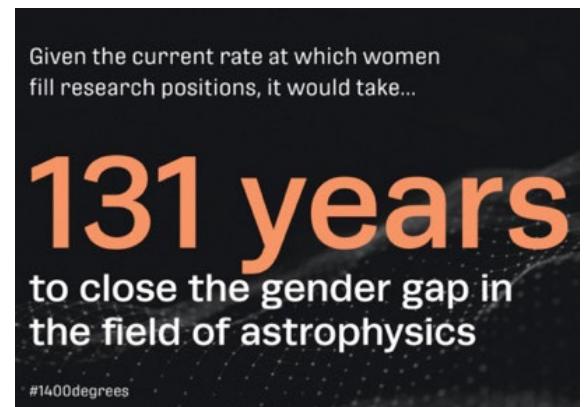
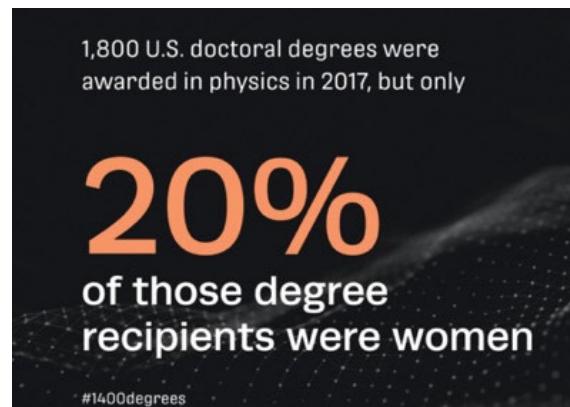


A graphic depicting the 1400degrees platform, where any female or marginalized gender identity in physics or astronomy can join the directory. By definition, those who join are extraordinary individuals who, by virtue of their presence in these fields, are transforming them.

<https://www.youtube.com/channel/UC7D-dEm33SyaTDtWYGO2CwdA>.

- A one-stop shop to find evidenced-based resources with informative glosses and easy access. For example, the site collects reports from the AAPT Team-Up project and “Opening Doors” from The National Academies; as well as landmark journal articles which both document bias in academic and research environments, and advises on best practices to eradicate it.

The 1400 Degrees site further promises a space for networking, mentorship, advocacy, and communication. While these features are clearly a work in progress, by joining one has the initial opportunity to receive updates on progressing capabilities, and continuing activities of the 1400 Degrees project to address diversity and equity in our field. ■



Social-media-ready graphics (above) and quotes (left) like these are available at the site under the “Share” link.