

# Female Nobel winner a long time coming, and a drop in the ocean

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Arthur Ashkin of the US split the 2018 Nobel Physics Prize with Gerard Mourou of France and Donna Strickland of Canada

When Canadian scientist Donna Strickland got the early morning call informing her she just [won the Nobel Physics Prize](#), she could barely hide her amazement.

Not just that she had clinched one of science's most prestigious honours—her pioneering work on laser pulses had earned her renown among the [physics](#) community—but also that she was one of only three women to win the award in its more than 100-year history.

"Is that all, really?!" she asked the audience assembled in the ornate, wood-panelled hall at the Royal Swedish Academy of Sciences in Stockholm on Tuesday morning.

"Well, OK. I thought there might have been more but I couldn't think."

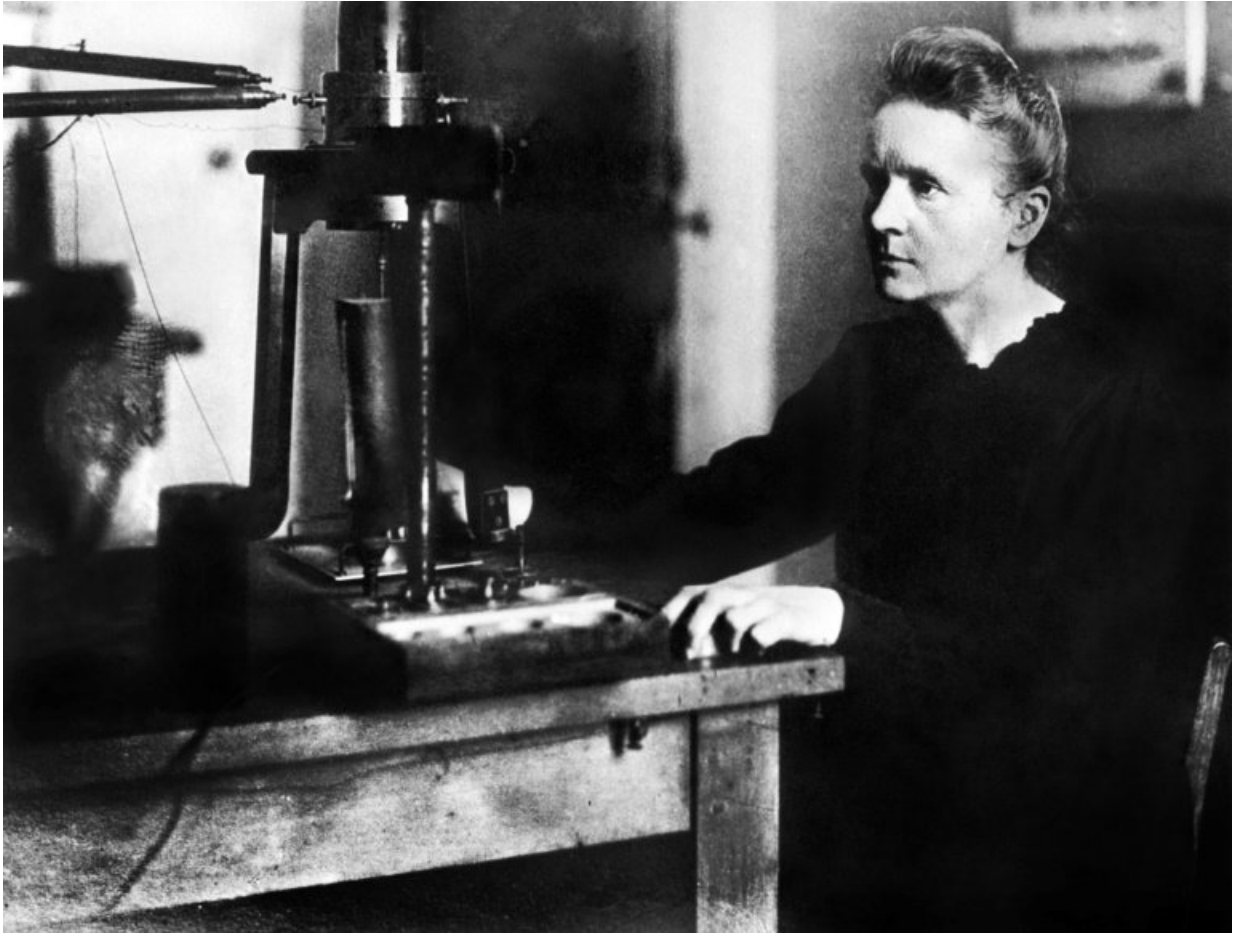
In becoming the first woman Nobel physics laureate in 55 years, Strickland won acclaim from her peers, who were keen to point out the boundary-pushing work done by female scientists across the world.

"There are women doing excellent research in all kinds of fields," Roisin Owens, biochemical engineer at University of Cambridge, told AFP.

She said that while historically it was true that far fewer women than men worked in research, the scientific community needed to wake up to the field's changing demographics.

"Sometimes people are looking in their own echo chamber, but the excuse of 'oh, we couldn't find any women (to reward)' doesn't wash anymore."

Of the 112 physics prizes the Nobel committee has awarded since 1901, the only women winners before Strickland were Marie Curie in 1903 and Maria Goeppert Mayer in 1963.



Marie Curie won the Nobel Physics Prize in 1903, only two women have followed her

### **'Change is happening'**

Jessica Wade, a researcher at Department of Physics and Centre for Plastic Electronics at Imperial College London, was so fed up with women in the field being overlooked that she spent the last year adding 270 Wikipedia entries on [women scientists](#).

She admits the [scientific community](#) has made some progress on the

gender gap—"schemes to support women in their return from maternity leave, shared parental leave, policies to prevent sexual harassment and bullying"—but the playing field is still far from even.

"There is also a growing, and concerning, area of society, who contemporary politicians and social media are allowing to propagate old-fashioned and sexist views," she said.

Europe's particle physics lab CERN suspended a scientist this week after he suggested that physics was "built by men" and accused women of demanding specialist jobs without suitable qualifications.

Alessandro Strumia of Pisa University shocked the audience at the Geneva lab during a workshop on high energy theory and gender.

For Patricia Rankin, professor of Physics at the University of Colorado, Boulder, Strumia's suspension was an example that "change is happening" in efforts to battle outright sexism in science.

But, she added: "I think there is a large list of barriers that women have to overcome including unconscious bias, different expectations and demands on their time."



New Nobel laureate Donna Strickland



## **Physics 'built by men'?**

The Swedish academy said Tuesday it was encouraging more people to nominate women for their science awards, "because we don't want to miss anyone."

According to Jennifer Curtis, associate professor of physics at the Georgia Institute of Technology, "awards beget awards... one important way to promote female physicists is to make sure to nominate them."

She said it was "fantastic" that Strickland had finally received recognition.

## **'Celebrate women scientists'**

Wade pointed to the work of Dawn Shaughnessy, the American radiochemist who discovered five elements in the periodic table, who has yet to be formally honoured with a Nobel.

In addition, according to Andrea Welsh, a Ph.D. student in physics at Georgia Tech, women scientists were far less likely to seek nominations than male peers.

"Nominating (yourself) for an award that gives you credit for work you have already done is very different than nominating yourself to do more work, especially in a field where your work is typically undervalued, where you are spoken over frequently, where there is no one else saying that you deserve something more," she told AFP.

For Owens, the fact that the Nobels are awarded for individual rather than team efforts could be another reason why there are so few women

winners.

"My sense is that women often work towards the collective good and often may sacrifice their individual career for advancing the community," she said.

Last month, Jocelyn Bell Burnell, one of the world's leading astrophysicists who helped discovered pulsars, said she was donating her \$3 million winnings from a prestigious science prize to help underrepresented groups get into physics.

"There are so many fantastic women scientists and engineers and we need to spend more time celebrating them," said Wade.

"Support the professional development of young [women](#), give them opportunities to talk and network, mentor them and nominate them for prizes, Nobel or otherwise."

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