

[Bright sparks: celebrating Wales' women in STEM](#)

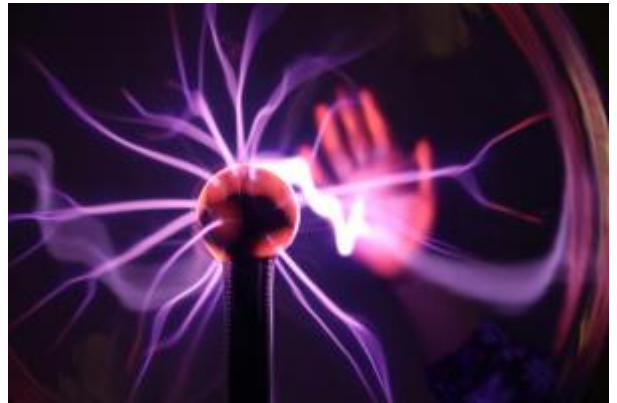
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Last week saw people around the world celebrating [International Women's Day](#), which calls on leaders and individuals to act as champions for gender parity.

Today in the Senedd, the [Women in Science and Engineering \(WISE\) campaign](#) is marking the occasion with its [Celebration of Talented Women in Wales](#).

The event will celebrate the contribution of women to Science, Technology, Engineering and Maths (STEM). In attendance will be the patron of WISE, HRH The Princess Royal. The event is sponsored by the [Minister for Skills and Science, Julie James AM](#), one year on from the launch of the [Talented Women for a Successful Wales](#) report.



For further information on gender equality indicators in Wales, take a look at this [previous blog post](#).

What is the STEM agenda?

In recent years, much effort has focussed on building a stronger STEM workforce. It is recognised that STEM skills offer opportunities not only for [individuals](#) but also to the [economy as a whole](#).

The Welsh Government's strategy [Science, Technology, Engineering and Mathematics: A delivery plan for Wales](#) highlights the importance of the STEM agenda in Wales.

Women in STEM: where are we now?

The STEM agenda seeks to support girls and women to pursue and succeed in STEM careers, as there is still a [significant gender imbalance in the STEM workforce](#).



Last year, the Welsh Government commissioned an independent task group to examine the challenges and opportunities for women in STEM in Wales. The report was led by Professor Julie Williams, Chief Scientific Advisor for Wales, who is one of only three female [Chief Scientific Advisors in the UK](#).

Key figures in the group's [Talented Women for a Successful Wales](#) report include:

- **STEM talent is valuable to the Welsh economy:** the engineering sector contributed 27.1% of UK GDP in 2014. Increasing the number of women in STEM could be worth £2bn to the Welsh economy;
- **There is high demand for STEM skills:** estimates suggest there is a need to double the number of engineering graduates by 2020. There is a shortfall of around 600 STEM academics in Wales;
- **Women are under-represented throughout the STEM career pipeline:** 12% of engineering and technology university students in Wales are female. Less than 10% of UK engineering employees and STEM professionals are female, and women are under-represented in all types of relevant leadership positions; and
- **STEM skills offer opportunities:** STEM skills are in high demand and can lead to well-paid jobs. On average, people in STEM professions earn 20% more than in other sectors.

What is the Welsh Government doing to support STEM?

By examining examples of best practice, the report includes recommendations grouped into four key themes: education, recruitment, retention and promotion to leadership roles. Together, these recommendations aim to develop and maintain the STEM talent pool, in order to maximise the opportunities for women and for Wales.

The Welsh Government has [accepted all 33 recommendations](#), 2 of which are specifically for the Welsh Government to action. Other recommendations call on employers, educators and individuals to play a role. Today's celebration in the Senedd will bring some of these partners together.



What else is being done to promote women in STEM?

There is a huge array of STEM initiatives offered by organisations in the public and private sector, including education institutions, professional bodies and businesses.

Initiatives can come in the form of [workshops](#) and [‘challenge days’](#), [science fairs](#), [online resources](#), [university taster courses](#), and [projects](#). There is even an [online X Factor–style competition](#) where students vote for their favourite STEM role model.

The [STEM Ambassadors](#) scheme brings STEM volunteers, providers and teaching professionals into one network. There are over 30,000 registered STEM ambassadors in the UK, of which over 40% are women. In Wales, the scheme is managed by [See Science](#), whose website contains an [index of STEM providers in Wales](#).

The [WISE Campaign](#), which is running the event in the Senedd today, works to promote STEM careers to girls and women, and to advise organisations. Their [People Like Me initiative](#) will be the basis for a workshop for school students at the event.

The [Talented Women for a Successful Wales](#) report gives details of some initiatives in Wales. Other examples of women in STEM initiatives include:

- the Women’s Engineering Society (WES), whose National Women in Engineering Day is [set to become international](#) this year;
- [Soapbox Science](#), who transform public areas into a novel platform for female scientists to speak to the public. Their next [event in Cardiff](#) will be on 10 June 2017; and
- [STEM Cymru](#), who have ‘Girls into STEM’ as one of their project strands.

The Royal Academy’s report [The UK STEM education landscape](#) summarises and discusses the range and impact of STEM initiatives in the UK, including those which focus on diversity.

What is it like being a woman in STEM?

I am partway through a PhD in chemical engineering, but currently undertaking a 3-month internship in the Research Service here at the National Assembly.



A career in STEM has so far proved to be a great fit for me, but I would be lying if I said that my gender hadn't mattered. When picking a university course, I did note the gender ratio. I have sat in meetings where, out of habit, the speaker would address the room as 'gentlemen'. I've worn comically oversized overalls because they are the smallest available.

These minor things tend to make me smile, but I know other women face much bigger barriers. As the report highlights, while discrimination is becoming less of a problem, unconscious bias is still an issue. There are also structural barriers, such as the challenges that arise from family responsibilities and career breaks.

On the other side of the coin, colleagues and peers have suggested that my gender will help me get along in my profession. There is always a balance to be struck between encouraging diversity and creating scepticism that undermines ability.

Each person's career journey is unique, but the themes in the Talented Women report certainly ring true to me. However, the sector is evolving, and it's an exciting time to be working in STEM.

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