The Woman Engineer
WOMEN'S ENGINEERING SOCIETY
www.wes.org.uk
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Dr Katherine Critchley, president of the Women's Engineering Society

Welcome to the Spring 2025 issue

Welcome to this edition of The Woman Engineer. As we plan and look forward to the annual conference, it's good to remind ourselves of our achievements over the last quarter.

Having onboarded the new trustees and co-opted trustees, who are Kate Wills, responsible for finance and Alysha Ratansi, responsible for HR, we started the new board with a strategy day to prioritise the activities of the board. This was a fantastic day, supported by our patrons. We will look to be utilising the members of the DCs and SIGs (Special Interest Groups) to implement the strategy work, supporting the strategic framework that we have been working on implementing for the last 3 years. So, if you want to get involved with this work, please consider joining one of the many DCs and SIGs. Our members and volunteers are what make WES (the Women's Engineering Society) a truly great organisation. The more involved you are, the more we can support each other, being part of a cluster is part of the core activity of WES.

The Caroline Haslet Lecture was a fantastic evening, with a very thought-provoking lecture given by Patricia Ashman of Coventry University. As always, its so good to see so many inspirational people achieve recognition from the lectures given by Patricia and Kerry Evans, this year's Karen Burt Award winner, to all the recipients of the awards that we present during the evening.

As we continue to move forward with a collaborative approach to how we work both together as members of WES and with other organisations, it feels apt that the theme for this year's WE50 awards is Together We Engineer.

I congratulate Susan Robson on her stellar efforts as interim CEO and for the work she has done to bring about a superb event in Aberdeen. More on that later. I hope we can get more of this kind of event, ensuring that we can feel included and supported with our engineering journeys through WES.

I look forward to seeing as many of you as possible at the Annual conference.

K L Critchley

Dr Katherine Critchley
President of the Women's Engineering Society
www.wes.org.uk

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Welcome to the Spring issue of The Woman Engineer

This issue includes updates on several of the WES Partnerships, which provides much support for their members. In particular, the most recent news about WES being chosen as Charity Partner for Ellie Driver - Nautical Architect and Marine Engineer.

We're also focusing on Robotics and how Automation is transforming Life Sciences, turn to P.10 for further details. Gillian Youngs, visiting Professor at the University of Greenwich, and UK WES Fellow writes about the sociotechnical impacts of the AI revolution – see P.12 for the full article.

The theme for the WES 2025 Annual Conference is 'Together We Engineer' and will take place in Birmingham on the 28th & 29th of April. There is a full range of technical talks, keynotes and workshops available to you. Visit **www.we.org.uk/events/annual-conference-2025** to register.

As always, I look forward to welcoming your feedback; **julietl@warnersgroup.co.uk**

Juliet Loiselle FInstR
Managing Editor

In this issue:

NEW MEMBERS

The Women's Engineering Society (WES) are delighted to welcome our new members:

Jessica Fuller
Tracy Sharp
Sarah Duggan
Sol Carolina Costa Pereira
Keziah Magit
Jasmyn Payne
Holly Taylor
Chineme Nwokwu
Naomi Blain
Yssor Alhindy
Aleksandra Stamenkovic
Zara Hussain
Gillian Passman
Keely King
Avani Chand
Sajalu Greenall
Amy Cuthbertson
Shaddei Hagen
Anna Bogush
Kirsty Pinnell
Eva Molero Pinelro
Vivienne Clark
Roslyn Hay
Shaddei Hagen
Saffron Pougher
Emer Kennedy
Kelly Loukatou
Claire Johnson
Jessica Whitford
Edwige Lindsey
Ellie Stevenson
Jessica Whitford
Nandini Mehta
Ainara Duran Hervas
Rebecca Shepherd
Aravind Jalajan
Huda Salman
Sher Mein Wong
Emily Tilbury
Clare Elliott
Sarah Chapman
Emily Fowler
Tania Berry
Rachael Pink
Adanna Ugo-Okoye
Elizabeth Joan Robin Aitken
Lucy Davidge
Keith Williams
Nicola Prentice
Emma Francois
Amina Danmadami
Daphiny Pottmaier
Rania Soodeen
India Agravat
Isabella Hollingworth
Laura Matic
Kam Ying Whitney Lee
Hunter Ryan
Lucy Wong
Grace Munday
Isabella Orme
Wennie Subramonian
Martina King
Mark Warrender
Nithya Subramanian
Mandi Anyangwe
Sophie Draper
Subhiksha devi Rajendran
Favour Chinda
Nadia Romero
Leah Crossley
Yinan Li
Negar Izadipour
Fatemeh Khodaparastan
Tong Zhang
Simone Graetzer
Jeanette Tate
Fiona Achale
Zareen Nazir
Elina Lee
Amy Bennett
Bethan Lukey
Bethan Jones
Sian McAdam
Clare Rhodes James
Beth Corrigan
Eilidh Reid
Nicola Wigg
Leona Huang
Antonella La Regina
Fengyuan Liu
Alex Mizak
Xiaolan Liu
Jane Roberts
Catherine Llewellyn-Jones
Trinity Hales
Ann Gina Lee Jia Ying
Kamaljit Kaur Dhaliwal
Lenka Price
Bernadette Harrison
Shirin Zadeh
Neeti Rakesh Gandhi
Stephanie Cairney
Nicole D'souza
Katharine Sheppard
Alfina Jose
Diksha Diksha
Clementine Biet
Amisha Desai
Judith Griffiths
Siwaphiwe Peteni

Fellow

Victoria Lange-Besenhard

2025 Annual Conference

This year the theme for our Annual Conference is **Together We Engineer** and will take place on the 28 and 29 April 2025.

The 2 day event is designed to inspire, educate, and connect women engineers across disciplines and career levels.

We will have a range of technical talks, keynotes and workshops as well as plenty of time to networking and connect in the exhibition areas.

Further details:
www.wes.org.uk/events/annual-conference-2025/

RIDING THE WAVES:

WES becomes charity partner of offshore racer Ellie Driver

The Women's Engineering Society (WES) is sponsoring nautical architect and marine engineer Ellie Driver as she embarks on the next stage of her career in offshore racing.

Ellie, who has been sailing for most of her life, began offshore racing four years ago.

Having studied A level maths, physics and further maths, she went on to obtain a degree in maritime engineering, graduating from Southampton University in the summer of 2024, before deciding to pursue a dedicated career in offshore racing. As a result, she moved to France in January this year, where she is now part of the elite offshore circuit.

The Women's Engineering Society sees the collaboration as a good opportunity to help raise the profile of young women engineers, using Ellie as a role model, while highlighting the support work WES provides.

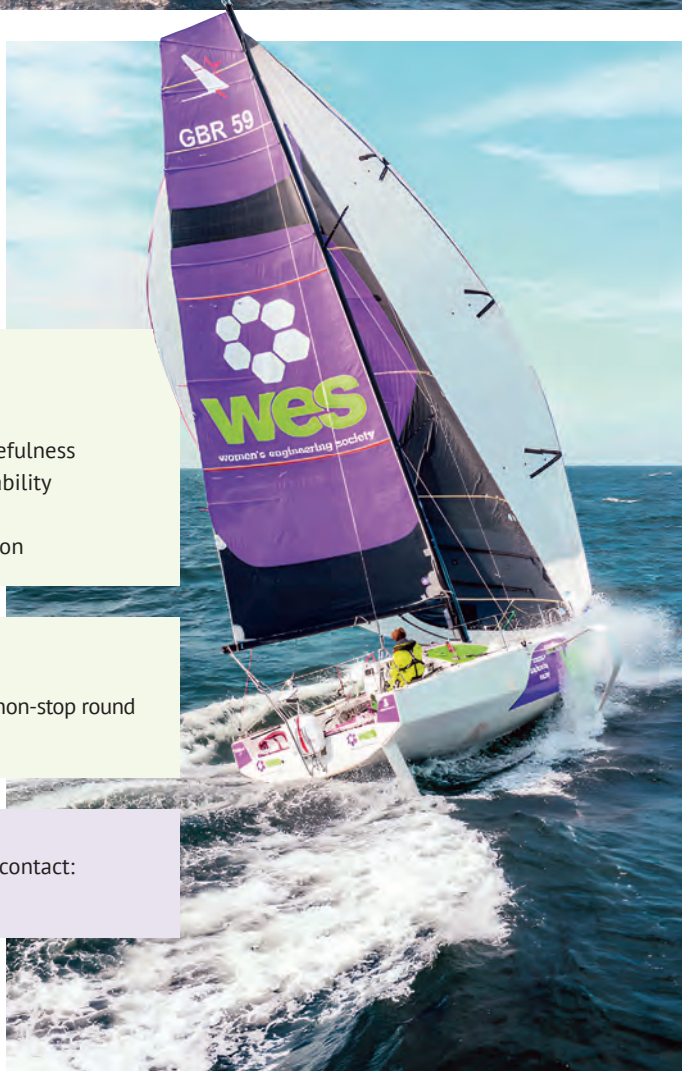
Ellie is also an employer for SR Structures, a boat-building company, and is the only naval architect within this business. As one of the team solely involved in the designing of parts of the boat, Ellie urged other women engineers never to be deterred from pursuing their ultimate goals.

"I'd really like to take this opportunity to show how women can be involved in this male-dominated industry," says Ellie.

Ellie's key STEM successes to date

- Masters in Maritime Engineering – University of Southampton
- Naval Architect at SR Structures
- Arkwright STEM graduate
- Women in STEM club leader for 13 – 16 year olds
- Innovative mind set towards project development

Photo credit: Paddy James, LimeTide Creative



Offshore Racing Skills

- Endurance
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- Drive
- Resourcefulness
- Sustainability
- Courage
- Innovation

The Goal:

To become the first female winner of the non-stop round the word Vendee Globe Race

To find out more on Ellie Driver Racing contact: **ellie@chillipepper.online**

A UNIQUE PARTNERSHIP WITH THE WOMEN'S ENGINEERING SOCIETY

THE STRENGTH OF EPSRC-WES AMBASSADORS BY DR NUR SARMA MIEE, DEI, IEEE WIE (SHE/HER)

EPSRC – **WES** Ambassadors for women in engineering: an initiative to tackle equality, diversity and inclusion in the UK engineering ecosystem.

At the heart of our journey lies a singular mission: To empower women to pursue their dreams and make them realise their true potential without any borders. We embarked on this adventure to demonstrate that achievement knows no gender, age or colour. We've turned our aspirations into reality, and now it's your turn. Remember, you're not alone on this path; we are here to support and uplift you every step of the way. Then, EPSRC WES Ambassadors were born…

How was it born?

The Engineering and Physical Research Council (EPSRC) is a UK government agency responsible for funding research related to engineering and the physical sciences. Like everywhere else, EPSRC is committed to addressing the widely reported issues of Equality, Diversity, and Inclusion (EDI) while accelerating cultural change to enhance EDI in the engineering, physical, and mathematical sciences. This commitment has led to a unique partnership with the Women's Engineering Society (WES), a UK-based professional organisation that has championed diversity in engineering for over a century. This partnership, which stands as a testament to the commitment of both organisations to drive positive change, supports selected researchers across the UK to become EDI advocates, referred to as EPSRC-WES ambassadors. ▶

Who are we?

The first initiative to gather the EPSRC-WES ambassadors cohort took place in 2019. Nine researchers from across the UK were selected following a screening process that evaluated the applicants' interest in EDI, as well as their values and advocacy. The success of the first round led to the creation of a second cohort, which gathered significant attention and resulted in an increase in applications. In the end, 21 researchers were selected as ambassadors for 2023 and remain in that role.

Support and collaboration

Highly motivated and dedicated EPSRC-WES ambassadors receive numerous forms of support from WES, including free membership, access to the mentoring scheme provided, participation in various purposeful events, and, last but not least, networking with a range of EDI supporters across the UK. Furthermore, the WES Education Cluster, a new addition to the WES portfolio of groups, demonstrates the positive change associated with EPSRC-WES ambassadors, as they actively support the Cluster and address the skills gap and EDI issues in the early stages of education.

▲ *The 1st meeting of the 2023 ambassadors in the EPSRC's Swindon office, September 2023*

The strength of the EPSRC-WES ambassadors lies in its diversity, which includes a range of ages, career stages, career levels, ethnic backgrounds, journeys and achievements. However, all members share a common passion and commitment to EDI within the research domain. Furthermore, they work in harmony to support the next generation of female engineers, raise awareness of engineering as a career choice, develop role models, and create a sense of belonging for female engineers in every domain.

Diversity

Another unique feature of the EPSRC-WES ambassadors is the geographical diversity of their home institutions, as illustrated in the picture on the side. This diversity creates a multi-layered beneficial arrangement: establishing EDI groups and initiatives within each institution, sharing best practices, facilitating collaborations on research beyond the scope of EDI, and championing women engineers at local, national, and international levels.

"Being part of the first EPSRC-WES Ambassadors cohort has opened a deeply personal journey for me. I believe that courage, confidence, and tools to better negotiate, influence and lead with purpose are essential ingredients for success for women researchers in engineering. I foster these ingredients through my international research and capacity building work and empower women to step into the spotlight, break barriers, and achieve the glory they truly deserve in engineering and beyond."

Prof Elena Gaura, Professor of Pervasive Computing, Associate Pro-Vice Chancellor Research, Coventry University

"Being an EPSRC-WES ambassador has empowered me to contribute to a growing community of diverse and talented engineers. By breaking barriers and inspiring the next generation, we can create a more equitable and impactful future in STEM."

Dr Xiaoyang Wang, Lecturer in AI, University of Exeter

"Being an EPSRC-WES Ambassador has been transformative for me—it's not just about advocating for inclusion but about creating real opportunities to inspire and uplift women in engineering, just as others once did for me."

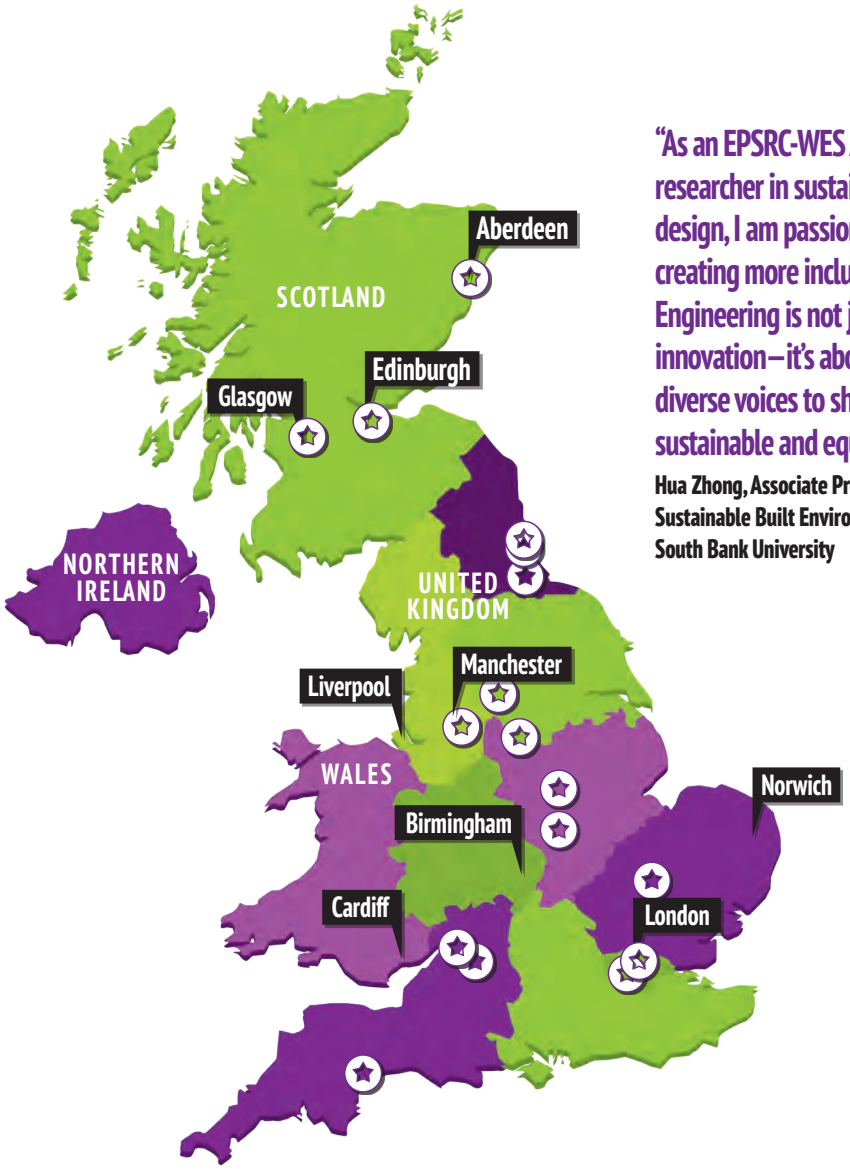
Dr Shaila Afroj, Associate Prof in Sustainable Material, University of Exeter.

What are our targets and initiatives?

Overall, the ambassadors strive to support each other in advocating EDI goals and creating equal opportunities in society, promoting a more equitable, innovative, and encouraging environment that benefits individuals, organisations, and society.

Based on the saying, 'Alone we can do so little; together we can do so much,' the next steps the ambassadors will take include activities and initiatives such as conferences, workshops, and community outreach programs to foster collaboration and promote engineering, including:

- Presenting the group in some of the well-known conferences targeting supporting women in STEM subjects, such as the WES Annual Conference 2025.
- Establishing an official website to increase the group's visibility and help raise awareness about its mission, goals, and activities among potential members, partners, and the general public.



"As an EPSRC-WES Ambassador and researcher in sustainable building design, I am passionate about creating more inclusive spaces. Engineering is not just about innovation—it's about empowering diverse voices to shape a more sustainable and equitable future."

Hua Zhong, Associate Professor in Sustainable Built Environments, London South Bank University

"Dedicated to having a life-long role in breaking barriers and actively promoting women in engineering, EPSRC-WES ambassadorship provided a platform which brought like minds together, amplifying my voice and enlarging steps in shaping our engineering community."

Professor Katarina Novakovic, Professor of Polymer Engineering, Newcastle University

"Empowering women in STEM goes beyond just inclusivity—it's about dismantling systemic barriers, fostering an equitable research culture, and unlocking untapped potential, because innovation cannot thrive in a vacuum of diversity."

Dr Farzana Rahman , Senior Lecturer and MSc Data Science Course Leader, Kingston University London

- Developing public engagement activities, such as creating postcards, to encourage interaction and inspire interest in engineering.
- Organising a student competition for the development of a group logo to promote the group's identity and visibility while contributing to students' personal and professional growth and fostering their interest and engagement in STEM-related activities.
- Developing research project proposals which enable a collaborative academic environment that leads to professional growth, increased success, and a more inclusive culture in universities.

"The EPSRC-WES ambassador role, for me, is a confidence booster and acknowledges the need to improve EDI in the research landscape. It motivated me to be more active towards EDI across my line of work and networks. I strive to support the group, colleagues, students and future generations of engineers, while I improve myself on the way. We are indeed more powerful when we empower each other."

Dr Evi Viza, Assistant Professor, Quality Management, The University of the West of Scotland

"Being part of the EPSRC-WES ambassador cohort has empowered me to continue championing the need for diversity and inclusivity in the engineering community. Through driving change together, we can inspire the next generation of engineers to create an environment in which every engineer can thrive!"

Dr Nicola Bailey, Senior Lecturer, King's College London

"I have always desired to be a role model for other women and girls in engineering, showing them what is possible and encouraging them to pursue their ambitions fearlessly. Becoming an EPSRC-WES Ambassador has brought me closer to achieving this goal, providing me with the opportunity to promote gender equality, empower women on a broader scale, and address the specific challenges that women face in engineering. Now, my voice is being heard more, and my role in society has become more meaningful and fulfilling."

Dr Nur Sarma, Assistant Professor in Electrical Engineering, Durham University

You can reach out to us by joining the LinkedIn group EPSRC-WES Ambassadors 2019-25 cohorts.

EPSRC-WES Ambassadors 2019-25 cohorts | LinkedIn

FUTURE LABS:

How Robotic and Automation is Transforming Life Sciences

BY SAMIRA EL KASSIMI, ROBOTIC & AUTOMATION BUSINESS DEVELOPMENT MANAGER, SCHNEIDER ELECTRIC

In recent years, robotics has emerged as a game-changer in the life sciences sector, enhancing efficiency and precision in pharmaceutical manufacturing, medical technology, and laboratory automation. Many companies are now implementing Future Labs, where the latest technologies—robotics, AI, and digital twins—are redefining research, production, and quality control. But as this transformation unfolds, questions arise about regulatory compliance, workforce impact, and investment viability. This article explores the transformative role of robotics in life sciences, its applications, regulatory challenges, and future trends.

The Need for Robotics and automations in Life Sciences

Automation has evolved into a necessity rather than a luxury in the life sciences sector. Companies in this field confront a multitude of challenges that highlight the critical role robotics plays in enhancing productivity and ensuring compliance.

Firstly, stringent UK and global regulations govern pharmaceutical production and laboratory environments. These regulations are designed to ensure patient safety, product quality, and environmental protection. Robotics can help streamline compliance with these regulations by automating documentation processes, maintaining accurate records, and facilitating real-time monitoring of production conditions. This not only minimizes human error but also enhances traceability and accountability, which are vital in regulated environments.

Secondly, the need for sterile, contamination-free operations in drug manufacturing is paramount. The life sciences industry must adhere to rigorous cleanliness standards to prevent contamination and ensure the integrity of products. Robotics can play a vital role in maintaining sterile environments through automated handling of materials and products, thus reducing human interaction and the potential for contamination.

High-precision requirements for research, diagnostics, and medical device assembly are another driving force behind the integration of robotics. In these areas, even the slightest error can lead to significant consequences. Robotics offers unmatched precision and consistency, ensuring that tasks such as pipetting, sample handling, and assembly are performed with accuracy. This level of precision not only improves the quality of research outcomes but also accelerates the development of new diagnostics and medical devices.

Moreover, the life sciences industry faces growing competition that demands faster drug discovery and production cycles. Robotics can significantly enhance throughput by automating repetitive tasks, allowing researchers and manufacturers to focus on more complex, value-added activities.

This increase in efficiency can lead to shorter development timelines, enabling companies to bring new therapies and products to market more quickly.

As the industry continues to evolve, the integration of robotic technologies will be essential for companies aiming to stay competitive and meet the high standards set by regulatory bodies.

Navigating Regulations for Automation in Life Sciences

Researchers and manufacturers in the Life Sciences sector encounter various market challenges, including heightened product complexity, increasing demand, and intensified regulatory scrutiny. Ensuring regulatory compliance for automation in this field involves adhering to a variety of standards and guidelines that guarantee automated systems—especially those utilized in healthcare and research—meet essential safety and quality criteria. The goal is to create optimal conditions for producing consistently high-quality

products that comply with FDA 21 CFR Part 11 regulations, all while minimizing costs and achieving sustainability objectives. By streamlining processes and enhancing data integrity, automation not only reduces the risk of non-compliance but also accelerates operational efficiency and improves overall product quality.

Addressing Workforce Concerns: A Higher Paid, Highly Skilled Future

One of the biggest misconceptions about automation is that it replaces jobs. In life sciences, the opposite is true, robots are enhancing the work of scientists, engineers, and technicians, not replacing them.

- ✔ Scientists and engineers oversee and optimize robotic systems, requiring specialized skills.
- ✔ Automation eliminates repetitive tasks, allowing professionals to focus on innovation.
- ✔ Life sciences professionals are highly paid, and automation only increases demand for skilled experts, not low-wage labour.

Unlike in other industries, where digital labour/Robots replace manual labour, life sciences automation is creating new, high-paying opportunities for trained specialists.

Future Labs: The Next Generation of Research & Manufacturing

Today's demand for vaccines and medicines puts huge pressure on manufacturers to run reliable and efficient operational facilities.

Automation has become essential in the life sciences sector, addressing challenges that enhance productivity and compliance.

- ✔ **Regulatory Compliance:** Strict UK and global regulations demand patient safety and product quality. Robotics automates documentation, maintains accurate records, and enables real-time monitoring, reducing human error and enhancing accountability.
- ✔ **Sterile Operations:** Maintaining contamination-free environments is crucial in drug manufacturing. Robotics minimizes human interaction through automated handling and utilizes advanced sterilization technologies to uphold cleanliness.
- ✔ **Precision Requirements:** High precision in research, diagnostics, and medical device assembly is vital. Robotics ensures tasks like pipetting and sample handling are performed with accuracy, improving research quality, and speeding up development.
- ✔ **Increased Efficiency:** Growing competition necessitates faster drug discovery. Robotics automates repetitive tasks, allowing teams to focus on complex activities, thus shortening development timelines.

Robotics effectively addresses the challenges of compliance, sterility, precision, and efficiency in the life sciences industry, making it vital for companies to remain competitive.

Key Applications of Robotics in Life Sciences

Laboratory Automation & Future Labs

Automated systems now handle repetitive lab tasks, freeing up scientists for complex research. Robotics in Future Labs enhances:

- ✔ High-throughput drug screening with AI-powered robotics.
- ✔ Precision sample preparation and genetic sequencing using cobots.
- ✔ Cloud-based data sharing and AI analysis, improving collaboration across research centers.

Pharmaceutical Manufacturing & Drug discovery

In sterile production environments, robots are ensuring consistency, safety, and efficiency:

- ✔ Cleanroom robots reduce contamination risks in drug production.
- ✔ Automated pill sorting and packaging maintain accuracy in medicine distribution.
- ✔ Robotic arms precisely mix and dispense compounds, ensuring uniform dosages.
- ✔ Robots can rapidly conduct experiments, analyse compounds, and accelerate the drug development process.

Medical Device Assembly & Quality Control

The demand for high-precision medical devices is growing. Robotics is enhancing:

- ✔ Microscopic defect detection using AI-driven vision systems.
- ✔ Surgical tool and implant assembly, ensuring precise manufacturing.
- ✔ Automated quality control, reducing production errors.

The Road Ahead: Where is Life Sciences Robotics Headed?

The robotics revolution in life sciences is just beginning. Emerging trends include:

- ✔ AI-driven drug discovery, accelerating research by analysing vast biological datasets.
- ✔ Robotics-as-a-Service (RaaS), allowing companies to access automation without heavy upfront investment.
- ✔ Autonomous mobile robots (AMRs) for hospital logistics, ensuring faster and safer delivery of critical supplies.
- ✔ Expanded use of digital twins, improving predictive modelling in pharmaceutical production.

As more companies embrace Future Labs and smart automation, the life sciences industry will become faster, safer, and more efficient paving the way for groundbreaking medical advancements.

Final Thoughts: The Future is Automated

The adoption of robotics in life sciences is no longer an experiment—it's the future. Companies investing in robotics today will lead the industry tomorrow.

By integrating AI, automation, and Future Labs, life sciences organizations can streamline operations, improve compliance, and accelerate scientific breakthroughs.

For companies hesitant to adopt robotics, the question is no longer if but when. The future of life sciences is automated—will you be part of it?

AI AND THE NEED FOR A RESET IN INNOVATION CULTURE

BY GILLIAN YOUNGS, VISITING PROFESSOR OF DESIGN AND DIGITAL STRATEGY, UNIVERSITY OF GREENWICH, UK WES FELLOW

The extensive sociotechnical impacts of the AI revolution currently underway stress in complex ways the urgent need to increase the numbers of women at all levels in Science, Technology, Engineering & Mathematics (STEM).

Understanding the fundamentals and specific nature of this revolution is intrinsic to unpacking the complexities and the imperatives they reveal for new forms of granular sociotechnical perspectives on vast areas of innovation.

Game changer

Not surprisingly, much is made of the game-changing data processing and analytical capacities of AI. Equally at issue are wider questions about the social meanings and implications of the resulting deepening of automation across production and consumption as well as the financial and other services linked to them.

My long-term applied research on innovation and digital economy highlights the significance of continuities as well as discontinuities for opening up the big picture of AI in these regards, and bringing its sociotechnical dimensions into the light to be examined as part of processes of innovation.

This applies at the macro and micro levels. In the case of the former we are talking about policy at all levels – global, national and local – and corporates, for profit and non-profit organizations and start-ups as well as the investment and funding structures that support them. In the case of the latter, we are talking about the individuals and different sections of communities who will be impacted by these dramatic technological changes.

Shaping priorities

The highly gendered story of STEM through the industrial into the more recent digital age is in play when we consider both macro and micro contexts and not only who is driving these changes but the historical context within which that is happening, how that will shape priorities and who is likely to benefit or suffer most and least from both the intended and unintended consequences of them.

The long history of automation in political economy embeds it not only within systems and understandings of production and consumption in industrial societies but also in wider ways as integral to the dynamics of modernity and the momentum of innovations associated with it.

Automation

Machine automation of industrial economy has now been joined by virtual automation of digital economy and the computer and information age. AI developments are progressing and intensifying this automation, driving it ever deeper into organizational and individual practices across sectors and within information, knowledge and research activities.

The masculinist nature of the STEM infrastructure of AI is a core element of historically-embedded continuity in this scenario, and its resulting partialities and distortions threaten to expand dramatically and rapidly as the automated realities of AI escalate. I have explored the concept of 'masculinist technological determinism' as a way of perceiving this threat and contributing to critical thinking about it.

The breadth of both the positive promise of AI and its anticipated increasingly pervasive social reach signals the value of such thinking to help prevent existing distortions being compounded and exacerbated by future innovation. Rapid improvements in diversity in STEM leadership, policymaking and practice are clearly part of this picture if the widest possible understandings of risks as well as benefits of AI are to be achieved.

This marks a step change in sociotechnical forms of interrogation of innovation policies and practices towards greater reflection on the entrenched 'technology first' trajectories and established patterns of masculinist technological determinism, and opening up of intensified strategies and approaches focusing on social impacts.

Recalibrating the balance

The speed of the AI revolution may be a major barrier to possibilities for recalibrating the balance between 'technology first' and social impact assessments. But this reset in innovation culture needs to happen at macro and micro levels, at every stage of development from conceptualization through to research, testing and application, and with recognition of intersectional inequalities and differentiated effects on varied communities.

Part of the case for such a reset in innovation culture rests in the evidence of recent history that many unintended consequences and unexpected outcomes, some more extreme than others, frequently accompany the planned effects of industrial as well as digital developments.

Tipping point

I conjecture in my latest book 'Feminist International Relations Through a Technospatial Lens' that current AI developments may represent a tipping point in greater awareness of and action in such areas, and in relation more broadly to the problems of masculinist technological determinism and the 'technology first' rather than more sociotechnical framing of innovation. I highlight macro and micro areas that support these possibilities.

Unanticipated outcomes

The ever-expanding damage of climate change and pollution in global and local contexts offers perhaps the most dramatic signal that sociotechnical imperatives and focus on unintended consequences are priorities worthy of much higher positions on policy, research and commercial agendas.

This awareness has long historical reach through to early and enduring developments associated with industrialization, but the more recent digital revolution has added new layers of unanticipated outcomes.

Notable among these is the array of harms now identified in misuses of digital media, including online stalking, harassment and grooming, sometimes leading to violence and murder. At a more mundane level, various forms of online and mobile phone addiction have led to a raft of public and policy debates as well as legislative moves against online harm to children.

This century's social media boom, which transformed micro communications in interpersonal as well as organizational settings, is now mired in complaints and concerns about the negative effects on health and wellbeing of 24/7 connectivity, the dangers of fake news, and severe, including life-threatening, risks to children from body shaming, suicide sites and paedophile networks.

These examples starkly illustrate that with AI's deepening of automation in social systems and processes there are plenty of reasons to take seriously the evidence that sociotechnical approaches are worthy of greater attention and priority than they have been given in the past and that the risks of not doing so now could expand greatly those risks in the future.

Such factors remind us that the gendered distortions of STEM are as much about future visioning as they are about the present. The work of long-established organizations like the Women's Engineering Society are vital in both respects. The various strands of its activities to open up STEM to girls and women is about how a more diverse STEM can shape long- as well as short-term realities.

Read more

See my book Feminist International Relations Through a Technospatial Lens: An Interdisciplinary Approach (Routledge, 2025) and my essay 'Inclusive Innovation: Feminist Perspectives' in Marianne Marchand and Anne Sisson Runyan (eds) Gender and Global Restructurings: Sightings, Sites and Resistances, 3rd ed. (Routledge, 2025).

EARLY CAREERS BOARD (ECB) MEMBERS REFLECTIONS

A selection of updates and opportunities shared by 4 members of the ECB Board.

Ines Tunga, EngD CEng

Last week, I had the privilege of speaking at Peter Symonds College Career Day 2025, engaging with around 60 enthusiastic sixth-form students about the opportunities for women in engineering. It was an energising experience to share my journey and inspire the next wave of future engineers.

Key Takeaways

- Your starting point is not your destination – The degree you choose is just the first step in a lifelong journey of learning and growth.
- Transferable skills matter – Engineering isn't just about technical knowledge; problem-solving, communication, and teamwork are equally critical.
- The energy sector is evolving – At Energy Systems Catapult, we are accelerating Net Zero energy innovation, and the students were particularly keen to learn about practical applications in engineering.
- Collaboration drives progress – Integrating diverse skills is crucial in shaping the future of sustainable energy.
- Support networks like the Women's Engineering Society (WES) are vital – Encouraging more women into STEM fields isn't just a goal—it's a necessity.

Engineering Needs Diversity

As we celebrate the International Day of Women and Girls in Science, let's continue to champion diversity in STEM. Encouraging young minds—regardless of gender—to explore engineering is essential to driving future innovation.

I'm grateful to Peter Symonds College, Southampton Solent University, and Promega Corporation for hosting such an impactful event. To my fellow engineers and scientists—let's keep mentoring, sharing our experiences, and opening doors for the next generation.

Let's inspire the future, together.

Moryse McInniss, Vice Chair WES Early Careers Board | ACABE

From Agony Aunt to Co-Chair: My Journey on the WES Early Careers Board

It all started with a nudge. While working at National Grid as an Operational Strategy Engineer, a few brilliant women encouraged me to apply for the Women's Engineering Society (WES) Early Careers Board. I hesitated—surely there were better-qualified people—but I thought, why not? Best decision ever.

The Board's aim is simple but important: To support and inspire early-career engineers, providing a platform for connection, career development, and representation within the engineering community. I jumped in as part of the Articles workstream, writing "Engineering Agony Aunt" columns. The goal? To offer practical, down-to-earth advice on common challenges faced by early-career engineers—like impostor syndrome, career crossroads, and finding your place in the industry.

Then COVID hit, and I noticed a big gap where early-career networking should've been. So, I helped launch the Events workstream to fill that space. We started with virtual speed networking sessions—short, lively events designed to help engineers meet peers and expand their networks (imagine engineering-themed speed dating!). Later, we even organised an in-person motorsport event, bringing people together to connect face-to-face.

This year, as Co-Chair, I've learnt how to lead, collaborate, and juggle way too many things at once—usually with a sandwich in one hand. Now my career's moving forward (and so is life!), and I'm so grateful for everything the Board has given me.

If you're thinking of applying, do it. You never know where it might take you. Sometimes all it takes is a bit of encouragement and a leap of faith!

Camila Rey da Rosa (She/Her), WES Early Careers Board Member | Women in STEM Ambassador

My journey with the Women's Engineering Society (WES) has been a fantastic experience, starting when I was the Vice-Chair of the WES Apprentice Board a few years back. Back then, I got loads of support and encouragement from my tutors, company, and college, which really pushed me to get involved with WES. Since I joined around four and a half years ago, I've been volunteering as a STEM ambassador and a female engineer ambassador, which has been a great way to champion diversity in engineering.

After I graduated from university, I applied to be part of the Early Careers Board (ECB), knowing how important it is to support the next wave of engineers. Being on the ECB has really boosted my career. I've had the chance to hone my leadership skills, learn about industry trends, and grow my professional network. Working alongside fellow board members and mentees has created a supportive vibe, where we can share our experiences and learn from each other's challenges and successes.

So, to all the female engineers thinking about joining this amazing board; go for it! Your voice matters, and you can inspire others—your journey could really help shape the future of engineering!

Kate Mactear (She/Her), CEng, MIET

I joined the ECB when it was first formed in 2016. At the time I was on the graduate scheme at BAE Systems. I was an active and enthusiastic STEM ambassador and my graduate manager encouraged me to apply for the board, and it was one of the best decisions I made!

I immediately met with 11 other early career engineers from other companies and universities who shared my passion for inspiring the next generation. And we got going right away! I've been involved in some amazing projects over the years, including creating a new poster and booklet for WES, hosting the ECB sessions at the annual conference and for the past 7 years, leading the Lottie Tour.

Being on the ECB has helped my career in so many ways. I've had opportunities to present and represent WES, to be part of panel sessions, to host STEM sessions, to lead projects, manage budgets and work alongside an incredible group of fellow engineers. Not only have we supported each other along the way, but I have made some incredible friends.

For anyone thinking of applying for the ECB, I cannot recommend it enough. Use this platform and help inspire the next generation of engineers!

Updates

- Brilliant turnout for the Virtual Speed Networking event hosted Thursday 20th February. ECB member Becky talked through her career path and how she has achieved her most recent position as a Test Engineer at Yasa. There was networking rooms created where everyone had time to meet each other. Isabella hosted a quick-fire engineering quiz to round off the evening.
- WES ECB members to attend the WES Annual Conference. Come say hi to find out more about volunteering experiences advocating for women in engineering, and how being a member of the board can bring value to your career path.
- See our Instagram page for monthly competitions and quiz's. Prizes could be techy bits or an opportunity to connect with a leader from the engineering industry. Profile username is **@WESECB**
- New podcasts coming in March, here is a link to existing media: Podcast promotion - **https://spoti.fi/4cjqztS**

THE ROYAL SOCIETY AND ENGINEERING UK'S RESEARCH SHOW GIRLS ARE SWITCHING OFF FROM SCIENCE

BY BECCA GOOCH, HEAD OF RESEARCH, ENGINEERINGUK

An excellent science education system is, as we know, essential for nurturing the future Science, Technology, Engineering & Mathematics (STEM) workforce as well as ensuring young people have the skills and confidence to engage with scientific and technological developments. Yet, research by STEM charity EngineeringUK and The Royal Society highlights girls are switching off from science – with 36% saying 'science is not for them'. The research identifies a troubling gender gap opening up.

The Science Education Tracker research, supported by Wellcome, looked at the attitudes to, and experience of science education and careers of 7,200 state-funded students in Years 7 to 13 across England.

First run in 2016, then in 2019, the 2023 Tracker included, for the first time, specific questions about engineering. The Tracker series gives a nationally representative survey of young people's attitudes and experiences of science education and outreach, their subject choices and pathways post-16 and their STEM career aspirations. It also provides perspectives on how these vary according to gender, ethnicity, and socio-economic background and as a series, offers a commentary on nearly a decade of consequential change in education.

Key findings:

- Only 12% of girls say being an engineer fits well with who they are
- Just 16% of girls think engineering is suitable for them
- Interest in science has declined and a gender gap has opened up
- 36% of girls say science is not for them
- Opportunities for practical science are particularly important for less engaged students
- Only a quarter (26%) of GCSE students doing hands-on practical work at least every fortnight

Additional analysis to the Science Education Tracker, published in March 2025, found some interesting differences between SEND and non-SEND students in future career aspirations. The new data found almost half (47%) of both SEND and non-SEND students as interested in a future career in engineering. But interestingly, more SEND students favoured a technology and computing career (43%) in contrast to non-SEND students (37%).

The data throws up some positive findings and it's great to see both SEND and non-SEND students as equally interested in a potential future engineering career. It's also fantastic to see so many SEND students with careers interest in tech; where we need a vast talent pool. Engineering is such a broad sector offering so many diverse roles and opportunities for young people in the UK. We must ensure our future engineering and technology workforce are not only well prepared for future roles but made aware of opportunities and entry routes in to training and employment.

We want to see more opportunities open up for disabled young people, who are currently underrepresented, making up 14% of the engineering and technology workforce compared to 18% in other occupations.

Attitudes to engineering

The SET research found engineering careers are seen as creative and versatile by most school students and over half young people believe they could become an engineer if they wanted to. However, for those not interested in a STEM career, girls are more likely than boys to say this is because they don't enjoy the subjects (57% vs 41%) and that they don't feel they are good at them (38% vs 20%).

Across all age groups, boys report much higher knowledge of engineering careers than girls and are more likely to say engineering is something for them. Only 12% of girls say being an engineer fits well with who they are, compared to 38% of boys.

"...only 26% of GCSE students doing practical work at least once a fortnight."

"We want to see more opportunities open up for disabled young people"

And just 16% of girls think a career in engineering is suitable for someone like them, in contrast to 44% of boys.

Too few students doing regular practical science lessons

Doing practical science is the key motivator to learning science (52% of year 7 to 9 students), with girls statistically more likely to say this. Yet, opportunities for hands-on practicals are in decline in school, with only 26% of GCSE students doing practical work at least once a fortnight. 71% of students across secondary schools say they want to do more and the appetite for more practical work is higher among students who are generally less engaged with science. This includes students who say they aren't interested in science or who see science as 'not for me'. 32% of young people in years 7 to 13 are in the 'not for me' group and this group is more likely to include girls. Indeed, 36% of girls say science is not for them.

STEM outreach is vital to spark interest

Extra-curricular activities boost young people's interest in continuing their STEM education. Half of students who visited a business said they were inspired to continue with STEM subjects and 45% of those who had a talk at school from someone working in STEM said the same. Yet just 43% of students had STEM extra-curricular activities in the previous year. STEM related work experience is also very low. 15% of young students had done a STEM related work experience, with a further 26% keen to do so but unable to secure a placement.

Next steps...?

The Science Education Tracker findings are a serious wake-up call. Hundreds of thousands more young people need to enter STEM careers to get on track to meet net zero, to improve sustainability, and for the UK to prosper. We need to do more to keep young people – and especially young girls - interested in STEM as they progress through school and build their understanding of the opportunities available to them.

Between now and 2030 engineering and technology jobs are expected to grow faster than other occupations. Engineering jobs are expected to grow by a further 2.8% adding 173,000 net new jobs.

Government must work on ways to ensure the teaching of science, maths and computer science is more engaging for all students and builds confidence in the subjects, particularly for girls. ▶

The independent Curriculum and Assessment Review by a panel of 12 experts led by Professor Becky Francis CBE, an expert in education policy and social equality, is a fantastic opportunity to give STEM education the focus it desperately needs. Spanning all school years in England, the review which will publish interim findings in spring, is looking closely at the key challenges to attainment for young people, and the barriers which hold children back from the opportunities and life chances they deserve, particularly those who are socioeconomically disadvantaged, or with special educational needs or disabilities (SEND).

The review – which is due to publish its final recommendations in autumn 2025 – is an important opportunity to modernise and improve students' experiences in schools and especially to increase their exposure to and interest in engineering and technology. EngineeringUK co-led work on a response to the review with the Royal Academy of Engineering on behalf of the National Engineering Policy Centre which also includes all the Professional Engineering Institutions and the Engineering Council.

We want to see a modern education system that enables students to comprehend the science, engineering and technology behind addressing global challenges, such as climate change, biodiversity loss and sustainable energy supply, enabling them to constructively engage with these issues. Students also need to develop the mathematical, digital and data skills to prepare them for the rapidly changing demands of an increasingly data-rich world.

The engineering and tech community also needs to step-up and help young people see the range of opportunities for them in engineering and technology. We can inspire them and encourage them to continue with STEM.

EngineeringUK, Royal Academy of Engineering, Women in Science and Engineering (WISE), Women's, Engineering Society (WES) and BCS (the chartered institute of IT) began a piece of work in autumn 2024 with the aim of creating a step change in the number of girls on pathways into engineering and technology to the age of 18. Still in its research stage, the work is exploring areas to bring about change from teacher training, classroom delivery, careers advice to peer mentoring to ensuring the STEM curriculum and textbooks are engaging across genders. We look forward to sharing the outcome of this important research upon its conclusion.

Read the Science Education Tracker here; **www.engineeringuk.com/research-and-insights/our-research-reports/science-education-tracker-2023/**

"Engineering jobs are expected to grow by a further 2.8% adding 173,000 net new jobs."

MENTORING: A POWERFUL TOOL AT EVERY STAGE OF YOUR CAREER

BY SUSAN BINNERSLEY, MANAGING DIRECTOR OF H2H

A lot of progress has been made over the years to bring more diversity to the engineering sector, although there is still a long way to go. According to a recent study, there was a decline in the overall number of women working in engineering and technology jobs, largely driven by a severe drop in women between the ages of 35 and 64. This suggests that women in the middle and later stages of their careers are not being retained, taking with them a wealth of knowledge, experience and skills. Mentoring is just one route that could make a difference to retention rates within this demographic, giving greater job satisfaction that can help to retain women of all ages, as well as bringing huge benefits to the wider workforce.

In this article, Susan Binnersley, founder and managing director of h2h, reflects on her personal experience of mentoring and discusses the positive role it can play for women working in the engineering sector.

My early experience of mentoring

Like many young people today, after graduating in the late 1980s with a degree in languages and politics, I decided that my prior career choice was no longer what I wanted to do. After exploring my options, I joined BAE Systems on a graduate programme and enjoyed a fabulous 16 year career working in two key sectors - air and marine - across five different locations. Throughout this time I benefited from some fantastic mentoring which shaped my roles and provided learnings that helped when I launched my own business years later.

"In this organisation we take two steps forward and one back, but that is still progress"

Some of this was in a formal mentoring situation, and yet much of it was informal - many pieces of advice I was given early on in my career have stayed with me 30 years later. ▶

For example, I was once discussing my frustrations with a senior leader, when we were making slow progress on a key project. They replied: "In this organisation we take two steps forward and one back, but that is still progress", which proved to be calming words that I'd repeat in the future. Thanks to my mentors, I learned to believe in myself and was encouraged to take what I thought were career risks, but which led to growth and rapid progression. My mentors also supported me when I challenged the status quo, which ultimately led to real change in terms of gender equality within the organisation I worked in at the time - this remains one of the most career defining moments I have experienced.

"An underused yet formidable ally"

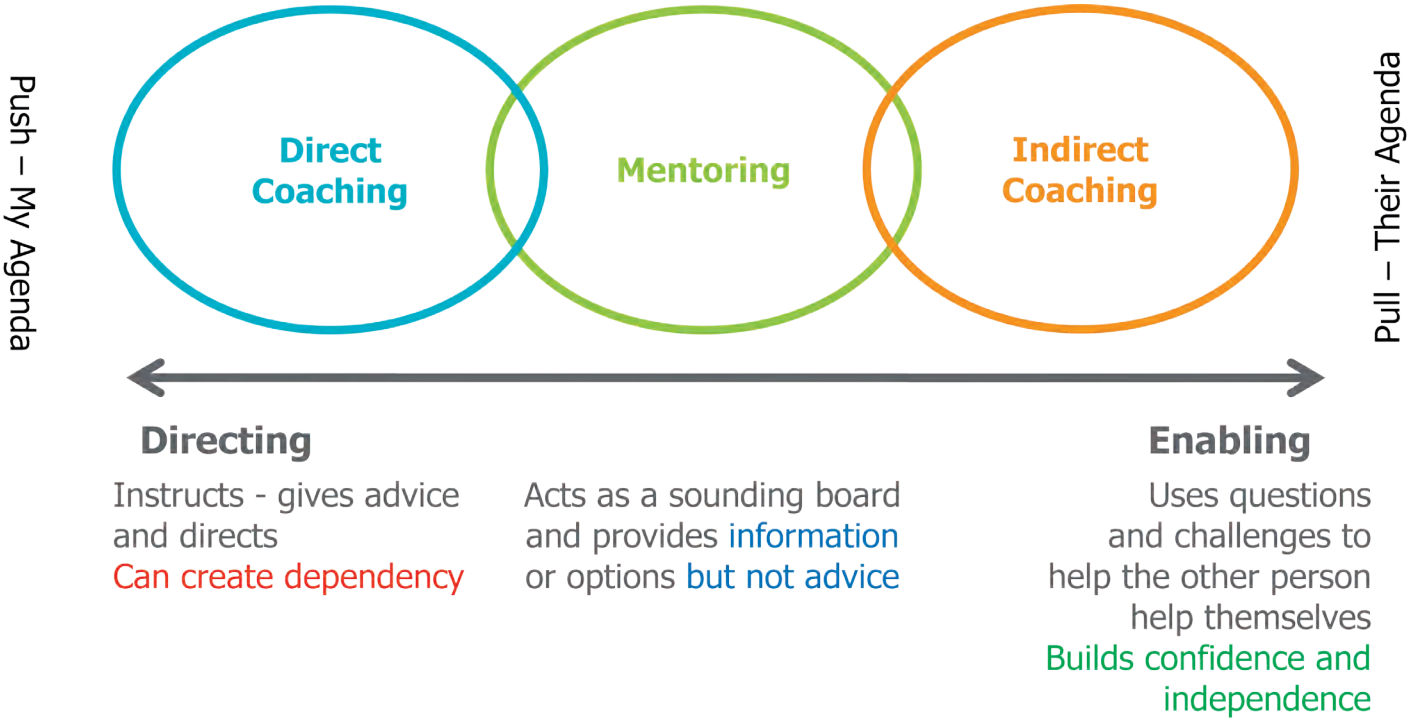
The CIPD defines mentoring as "a relationship in which a more experienced colleague shares their greater knowledge to support the development of an inexperienced individual. It calls on the skills of questioning, listening, clarifying and reframing that are associated with coaching." In my experience, mentoring is an underused yet formidable ally that can support people at all stages in their careers. It can be useful when facing a fresh challenge, by seeking out support from an older colleague who might have already learned some of these lessons, or who has specific insight into an area you are going into for the first time.

> "A RELATIONSHIP IN WHICH A MORE EXPERIENCED COLLEAGUE SHARES THEIR GREATER KNOWLEDGE TO SUPPORT THE DEVELOPMENT OF AN INEXPERIENCED INDIVIDUAL."

However, it would be wrong to assume that this is the only dynamic where mentoring is beneficial. Increasingly, I have seen some incredibly powerful reverse-mentoring programmes that ignite collaboration in the multi-generational workforce of today. This can be a powerful tool for people who are looking for a change in the middle or towards the end of their careers, who might feel they have lost their purpose or who are looking for a new challenge. By working with younger colleagues - on either side of the mentor relationship - this demographic can find a new lease of life, explore new challenges and experience different job roles - all without needing to leave the organisation. Too often, I see people quit their jobs, not because they want to leave the business, but because they feel their career opportunities have run dry. Mentoring can open employees' eyes to another side of the business and a fresh start without the need to leave.

Asking for mentoring support

Some businesses offer formal mentoring programmes, while others work it into existing HR initiatives and programmes. For example, at h2h we work with engineering firm Trelleborg Group and have designed their graduate scheme for the last 12 years, weaving mentor support into the programme,



so that every person on the scheme has access to this valuable resource. This also helps to bring wider benefits to the business, embedding learnings from the programme throughout the rest of the organisation.

However, not all organisations have official initiatives and it sometimes falls to the individual to request support. In this scenario, the following tips can help:

1. **Be comfortable asking for a mentor:** It is flattering to be asked to mentor someone and people will make time for this rewarding activity. Consider in advance what you want from your mentor and others in your organisation may be able to advise.
2. **Be specific:** Provide the context, be specific about what you want to get out of it and be enquiring.
3. **Learn how to listen well:** Having asked for help, be ready to pay attention, absorb and playback what you are hearing.
   There are 3 recognised levels of listening, these are:
   - Level 1 - hearing what is said, yet your mind may be drifting somewhere else.
   - Level 2 - being attentive and actively listening
   - Level 3 - giving full attention to the other person, noticing the emotion and noticing what is not being verbalised.
4. **Create a climate of trust:** The more open you are, the more likely you will get good mentoring support. Yet in doing so, you are likely to be sharing some vulnerabilities and therefore you need to be in a psychologically safe space.
5. **Challenge your mentor:** This will lead to deeper mutual understanding.
6. **Play back:** Share what you intend to do with the insights you have gleaned. This will also bolster your accountability to yourself and your mentor.
7. **Get different perspectives:** There will always be alternative views, so try to engage with more than one mentor.
8. **Reflect:** Make time to reflect on progress you are making with your mentor and develop a habit of reflective practice, especially if you are wanting to change a behaviour. Psychologists tell us that it takes at least three months to change a habit, so some rituals and routines to sustain change are important.
9. **Loop back:** Once you have applied the insights you gleaned from your mentor, they will appreciate knowing they made a difference.
10. **Pass it forward:** Enjoy the pleasure of supporting someone else in this way.

Clearly, there are multiple benefits of mentoring - particularly in the STEM sector, where skills shortages continue to be a problem. Mentoring can offer a fresh start and a new perspective for employees across the board. In recent years there has been a resurgence in apprenticeships and graduate apprenticeship programmes, which is great news but also means there will be an even greater demand on organisations to upskill, train, guide and nurture a high volume of new recruits. Mentoring can help to remove the burden on first-line leaders and help young candidates to navigate the world of work.

Mentor schemes can also help the mentor gain a sense of fulfilment within their own roles; particularly those approaching retirement. We face a situation in the UK whereby a highly skilled demographic is nearing retirement age yet no longer in a position to leave their roles, or who still want to add value in a different capacity. Coupled with the disappearance of final salary pensions and the rising cost of living, employees are set to continue working long into their 60s and 70s, meaning workforces could see vast age gaps across the career spectrum. This might initially be seen as a challenge, but mentoring between these demographics can bring untold benefits to all involved.

Whether you are an employee keen to explore how mentoring might help you, or a business leader or HR professional looking to tackle the challenges of the modern day workplace, I would strongly urge you to consider whether mentoring could be the answer.

Did you know, MentorSET is a free mentoring scheme run by WES to match its members with independent mentors who understand the challenges faced on returning to and progressing through work and who can provide support and advice. It offers female and male cross-sector independent mentors from around the UK.

To join email **membership@wes.org.uk**

Thriving in a non-linear career

The progression from PhD to Professor is an impressive career achievement. Follow the journey below for more on **Professor Dani Strickland**, and her more circuitous path.

After working in industry and academia followed by a career break for her family, the Daphne Jackon Trust supported Dani's return to research. Now a Professor of Electrical Power Engineering at Loughborough University, she works to promote the next generation of net zero technology.

A career cut short

Dani finished her PhD in 1994 and took a role as a postdoctoral researcher at Cambridge. She then joined the electrical department at E.On, working in research and development on electric bus charging infrastructure and electric grid studies, among other projects.

After the birth of her second child, Dani found the demands of full-time work and childcare impossible to balance, she made the difficult choice to leave engineering to focus on her children. When she was ready to return to work, she found that her confidence was low - she was behind in the latest technical developments and part-time technical work was almost impossible to find.

Returning to research

Then Dani heard about the Daphne Jackson Trust, a charity that helps people who have taken a career break of at least two years for caring, family, or health reasons return to research. She won a two-year, part-time Daphne Jackson Fellowship funded by Rolls Royce and hosted at the University of Sheffield exploring how to electrify aircraft components to reduce emissions.

"The Daphne Jackson Fellowship helped me return to a research-based environment and gave me the time, space and support to understand how technology had changed and the new challenges in my area. I highly recommend this as a career move after a break. It gives you the opportunity and space to re-establish yourself" says Dani.

Career, restarted

Dani's Daphne Jackson Fellowship provided her with retraining and networking opportunities, and during her fellowship she was offered a job at Rolls Royce, within their fuel cell systems group, where she eventually led the team. Later, Dani returned to academia as a lecturer, then senior lecturer, at Aston University. She worked on second life battery systems, exploring new applications for these batteries and looking into the power electronics needed to ensure reliability for recycled batteries.

There were still challenges for her, including managing childcare and maintaining work/life balance while dealing with the real and perceived career limitations of part-time work.

Becoming a Professor

In 2017, Dani moved to Loughborough University and was later promoted to Professor. After two decades of part-time roles, she has recently returned to full-time work. Dani's work now focuses on a wide range of research interests, mostly within the field of electrical power. Her main focus is the development of low-cost technology that contributes to net-zero and benefits people, and she publishes in open-source publications when possible.

Dani is part of a vibrant team whose recent work includes Aftrak, which seeks to integrate micro-electric tractors and solar farms to build a circular economy in sub-Saharan Africa and has a system under field test in Malawi. For this work, the team won the Milken Motsepe $1million prize for Green Energy 2024, the IET innovation and excellence award for Power and Energy 2024 and most recently, The Engineer's 2024 Collaborate to Innovate Grand Prix Award.

Dani also works with a team building battery-electrolyser systems, batteries that can also produce green hydrogen. She has secured funding through the EU and Innovate UK to help scale up this technology. Later this year her team is shipping out green hydrogen battery-electrolyser units to Africa to trial a green hydrogen cooking technique while providing electricity for lights and other requirements.

She remains involved in battery work, looking at AI to detect when batteries will fail, and continues her electricity network research, working with a team developing low-cost sensors to improve the knowledge of faults on the smart-grid. This is under trial for National Grid Distribution. Outside of research, she runs a multi-million pound Centre for Doctoral Training (EnerHy) which can provide training and developing up to 60 PhD students.

Lessons Learned

For Dani, the ability to balance her career and family was invaluable, but the road to returning and building a career wasn't always easy. She advises women to know their worth in negotiations and understand the trade-offs involved in working part time. She believes finding a supportive team was key. Dani says "Everything I do is in a team, it's not just me."

Perhaps most importantly, Dani shows us that there are many paths to a successful career in engineering, and a break shouldn't mean the end of a promising career. Dani reiterated "The Daphne Jackson Fellowship was there at a key point in my life. I fully believe it was the kick start I needed to get where I am today."

Heritage Open Days 2025

A wonderful opportunity – calling for members to get involved!

Since our Centenary celebrations in 2019, WES has taken part in Heritage Open Days, a festival coordinated by the National Trust, celebrating England's heritage. As WES doesn't have an actual heritage site to put on show, we like to partner with other venues and bring to life stories of our past women engineers relevant to that partner or locality.

In the past themes have included innovators and inventions, where we showcased "Ten Women in Ten Days" which revealed the stories of Brighton's Maude Dickinson and aircraft pilot Hilda B Hewlett. Our "Women in…" series included Northamptonshire's entrepreneur Mary Maxwell-Channell. In 2024, our Electric Dreams series we highlighted the contributions made by women of the Electrical Association of Women to the advance of electricity as a domestic commodity.

This year's Heritage Open Day theme is Architecture and once again we will be asking members if they would like to deliver a talk on a chosen woman or topic relevant to this, or partners if they would like to host an event. Does your employer have a fascinating story to tell about its women engineers? Is the building you work from a female architect's dream?

If you would like to be involved and have an idea to highlight women in architecture through Heritage Open Days then please contact our Heritage Manager, Helen Close **helen.close@wes.org.uk**.

Do you have a product or a service that you would like to promote to the UK's women engineers?

Next Publication: **Summer 2025**
Mailing Date: **July 14, 2005**
Editorial submission deadline: **June 13, 2005**
Advertisement booking deadline: **May, 16, 2005**
Advertising copy deadline: **June 13, 2025**

The Woman Engineer is the journal of the Women's Engineering Society (WES), and has been produced since 1919. The journal is an important tool for research as it contains a wealth of information regarding not only women in engineering but also a wide variety of information for social history, gender studies, and innovation in the UK since 1919. The Woman Engineer is posted free to all WES members, and a number of subscribers, including the legal deposit libraries, with a print run of 1,700 copies a quarter. A pdf copy of the journal is uploaded to the WES website, and PDFs of issues since 2015 are available at **www.wes.org.uk/news/The-Woman-Engineer**.

WES welcomes case histories from its members on innovative engineering solutions. These contributions are similar to case studies but should include some technical or engineering details. Submissions must be objective and may not be used for promotional purposes.

Published quarterly in Spring, Summer, Autumn, and Winter, we offer a range of advertising spaces.

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INTERNATIONAL WOMEN IN ENGINEERING DAY

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