# Women in STEM

# Putting a human-centric approach at the core of AI

AI is grabbing many headlines but the ethical and moral questions it brings up could spearhead change needed for a more just and equable world

**QUINTON O'REILLY**

The Women in STEM summit first began in 2022, but coming into its third year, it's quickly become an institution.

Taking place in the Hogan Suite in Croke Park on Wednesday 13th March, the packed hall was full of chat and energy before the event started proper, showing the appetite and interest in creating a fairer and more equitable world for all.

Sarah Murphy, chief executive of the *Business Post*, opened the summit and highlighted the room has the power to redefine the landscape before handing it over to summit chair Sonya Lennon, TV presenter, designer, founder and social entrepreneur.

After taking a selfie of the packed room and joking that she would tag everyone in the photo, Lennon commented on the event's extraordinary growth in the last three years. Throughout the summit, she deftly moved between serious and humorous when required.

This led to the first international keynote address, which Lennon described as a gift, delivered by Diana Kelley, women in cyber security (WiCyS) board member and CISO of Protect AI USA.

Speaking about understanding AI threats, she broke down AI into understandable terms. Despite the recent hype, she highlighted that AI has existed since the 1960s and that major opportunities exist to shape its course.

"It's important that everybody takes AI security seriously," she said. One thing I'd love for women in AI is that the security and tuning of it is actually fairly new. There are a lot of opportunities for us to get involved, and if anyone is working in the software space, AI is just a different type of software. It's an asset in organisations, so it's not that different."

The keynote panel discussion on plugging the talent gap followed, featuring Graham Abell, VP of software engineering and site lead at Workday Ireland; Gillian Harford, country executive of the 30% Club Ireland; Caroline Cawley, chief executive of Innovation Technology AtlanTec Gateway (itag); and Dr Eilish McLoughlin, associate professor and head of the School of Physical Sciences in DCU.

When asked about inflexion points that help push young women and girls towards STEM, Harford reframed the thought process by saying we should think about inflexion days instead and how young girls and women already have experience with tech throughout their lives.

"We talk so much about women in STEM that there's a danger we're building a huge mystery around it," she said. "I don't know any three-year-old who can't operate a smartphone; I don't know any seven-year-old who can't work the Sky system better than I can."

"But we still keep thinking we have to catch girls differently from boys instead of thinking every day how we demystify it and say there are opportunities."

The following keynote address was both heartwarming and funny, with Lorna Martyn, Ireland regional chair and senior vice president of technology at Fidelity Investments, speaking about authenticity and being yourself.

Referring to the earlier AI chat, she mentioned she would talk about being human as it's more important than ever and that no path is linear, covering many of the qualities that helped her in her career.

"Careers are a maze," she explained. "We talk about ladders, but I want to tell everyone in the room not to compare themselves to each other. It's not Instagram life; you shouldn't be doing something because your friend is doing it. It's about understanding yourself and your abilities and thinking very carefully about your aspirations."

Before the coffee break, there was time for one more panel discussion on driving female entrepreneurship. Appearing here were Sandra Healy, chief executive of Inclusio; John Keaney, chief executive of SIRO; Emma Callinan, director of commercialisation at Enterprise Ireland; and Carol Andrews, managing director of the Bank of New York Mellon and co-chair for Balance for Better Business.

Callinan mentioned an essential point: fewer women are applying for HPSU (High Potential Start Up) projects, yet they have a higher success rate when they do.

"We've seen great examples of gender equity in terms of the projects that come through 60 per cent of our HPSU research have female founders on the founding team. she mentioned. "That's a lovely statistic to be able to shout about."

"We see a lower percentage of female applications to those projects, yet women have a higher success rate than their male counterparts when they apply. So if I can, I'd encourage higher levels of risk-taking among those today in terms of innovative R&D projects."

## Blazing trails and breaking barriers

The late morning saw the summit split into three talks, with high turnouts all around. The first one, chaired by Lennon, focused on blazing a trail in science.

The second stream focused on women in technology spearheading digital transformation and was chaired by Martina Campbell, deputy chair of WITS. The third stream focused on breaking barriers in space, engineering, and energy and was chaired by Harford. Stream one began with a keynote address on empowering researchers through challenge-based funding, delivered by Dr Abigail Ruth Freeman, director of Science for Society at SFI. This progressed to a panel discussion on how best to encourage the development of STEM-related skills with girls, with Jennifer McGarry, teacher at Alexandra College Junior School, Mary McMahon, scrum master at Fidelity Investments Ireland, Sheila Porter, founder & chief executive at Scifest, and Tracey-Jane Cassidy, Founder & chief executive, Junior Einsteins Science Club.

This stream concluded with presentations from rising starts in the STEM space and featured Jeevantika Lingalwar, founder of International Women in Tech, Dr Han Shao, postdoctoral researcher at Tyndall Institute, and Lieutenant Eva Finn, platoon commander of 2 Brigade CIS at the Irish Defence Forces

Stream two began with Dr Tanya Mulcahy, director of Health Innovation Hub Ireland and founder of Femtech Ireland speaking about enhancing women's lives with heath tech innovations.

This was swiftly followed by a panel discussion on spearheading digital transformation which had Caitriona Mordan, cluster manager at Advanced Technologies in Manufacturing (atim), Jennifer Cox, director for Ireland in Women in Cyber Security (WiCyS) UK & Ireland, Dr Hazel Murray, cyber security lecturer and researcher at MTU, and Louise Callanan, CIO and assistant national director at eHealth Director HSE South West

This stream also concluded with presentations from three inspirational founders sharing their expertise: Destiny Ayo Vaughan, founder of Mind the Gap, Michelle McDaid, co-founder of TrustWorki, and Sandra Healy, chief executive of inclusio.

Stream three began with Lorraine Hanlon, director of the Centre for Space Research at UCD speaking about the work behind EirSat 1, Ireland's first satellite in space.

This then led to a panel discussion on meeting climate goals and boosting profits, discussed by Tina Raleigh, head of offshore wind at Statkraft Ireland, Chris Collins, country president at Schneider Electric Ireland, and Dr Emma Britton, lecturer in civil engineering at ATU.

The final series of presentations was made by Emma Quigley, engineering student at the University of Nottingham, who spoke about her life with albinism and how minor adjustments can have enormous benefits for those with disabilities.

Rachael O'Boyle, operations engineer at Energia Group, spoke about her journey from student to engineer, and encouraged young women to pursue opportunities and for everyone to continue paving the way for women to enter STEM and break more barriers.

And Kara Foley, petty officer and radio radar technician for the Irish Naval Service, speaking about her becoming the first female petty officer in the radar service.



Front Row: Mary McMahon, Scrum Master, Fidelity Investments Ireland; Emma Callinan, Director of Commercialisation, Enterprise Ireland; Grace Aungier, Conference & Awards Director, iQuest & Business Post and Kara Foley, Petty Officer, Radio Radar Technician, Irish Naval Service. Middle Row: Eva Gallagher, Site Lead, MSD Carlow; Diana Kelley, Women in Cyber Security (WiCyS) Board Member and CISO, Protect AI, USA; Chris Collins, Country President, Schneider Electric Ireland and Major Pursuits Leader UK & Ireland Zone and Lorna Martyn, Ireland Regional Chair and Senior Vice President Technology, Fidelity Investments. Back Row: Rachael O'Boyle, Operations Engineer, Energia Group; Shay Cloherty, Managing Director, iQuest/Business Post; Dr Han Shao, Postdoctoral Researcher, Tyndall Institute and Lieutenant Eva Finn, Platoon Commander, 2 Brigade CIS, Irish Defence Forces

## Human-centric approaches

The afternoon saw the main hall packed again for the final talks on addressing gender bias to achieve ethical AI solutions. The common theme is that humans must be at the centre of these decisions and augment rather than replace them.

In a captivating afternoon keynote address, Dr Lollie Mancey, programme director of UCD Innovation Academy, raised the question of what it means to use AI well and refocused on human-centric design.

Mentioning that people are experiencing more loneliness than ever despite being more connected, she highlighted the importance of putting the person at the centre of these questions.

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"Do we want algorithms that maximise our engagement or help us flourish?" she asked. "Do we want our devices to make our lives more convenient or more meaningful?

"We shouldn't expect tech companies to make these decisions for us. The real work is to be intentional, go from active to passive, and say to the person next to you, 'What does it mean for you to flourish, and how can I truly connect?'

Before the end, there were two more panel discussions. The first was on addressing gender bias to achieve ethical AI. Contributing to this was Monica Madan, chief financial officer of Schneider Electric, Lye Ogunsanya, IUSA emerging leader 2022, Dr Nicola Stokes, chief technologist of international financial services at IDA Ireland, and Kelley who returned to the main stage after her morning AI talk.

Madan made a succinct point about AI bias, saying it "isn't coming from heaven; it's man-made. If we don't train it well, we've nobody else to blame but ourselves," she concluded.

The locknote panel discussion focused on accelerating female corporate leadership and included Patrick Murphy, chief executive of Codex Office Solutions, Eva Gallagher, site lead at MSD Carlow, Lorna Martyn, Ireland regional chair and senior vice president of technology at Fidelity Investments, and Una Fitzpatrick, director of technology Ireland at Ibec and executive board member for Digital Europe.

Gallagher mentioned one encouraging element referencing an earlier mention of Gen Z and its desire for social good.

"With Gen Z and their desire to change the world, there's a huge focus within the industry on relaying that back and making sure employees know where that implementation is," she said.

After Dr Mancey's talk, Lennon asked the audience if they had enjoyed the day so far, which got cheers of yes and a round of applause. Closing the summit, she gave attendees a goal: to schedule some reflection time on what they learned at the summit and commit to actions that will help them in their personal and professional lives.



Kara Foley, Petty Officer, Radio Radar Technician, Irish Naval Service; Emma Quigley, Engineering Student, University of Nottingham and Rachael O'Boyle, Operations Engineer, Energia Group



Gillian Harford, Country Executive, 30% Club Ireland; Dr Eilish McLoughlin, Associate Professor and Head of School of Physical Sciences, Dublin City University (DCU); Graham Abell, VP, Software Engineering & Ireland Site Lead, Workday and Caroline Cawley, CEO, Innovation Technology AtlanTec Gateway (itag)



Diana Kelley, Women in Cyber Security (WiCyS) Board Member and CISO, Protect AI, USA; Lye Ogunsanya, IUSA Emerging Leader 2022; Dr Nicola Stokes, Chief Technologist, International Financial Services, IDA Ireland and Monica Madan, CFO, Schneider Electric



Emma Callinan, Director of Commercialisation, Enterprise Ireland; John Keaney, CEO, SIRO; Sonya Lennon, TV Presenter, Designer, Founder & Social Entrepreneur Sandra Healy, CEO, inclusio and Carol Andrews, Managing Director, Bank of New York Mellon, Co-Chair, Balance for Better Business



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