

Chancellor Dharker,

This is Engineering. The talented people graduating today hold our future in their hands. Few professions offer the chance to contribute so directly to the creation of a more sustainable, more just world. But doing so requires an engineering community whose composition reflects that world. Today, we honour Dr Hayaatun Sillem, one of the nation's most progressive leaders in engineering and technology, a champion for diversity and inclusion in action.

Hayaatun was born in West London into a family with mixed Indonesian, South African, Indian and English backgrounds. She recalls that "My parents really encouraged me to self-reflect, to be somebody who thought about my interaction with the world, my interaction with other people, and from quite a young age to take responsibility for my actions and for what I could do to improve a situation." At the same time, Hayaatun describes experiencing a sense of difference that made her feel the need to adapt to each social situation because, as she says, "Whichever group I'm in, I'm not in the majority".

Hayaatun's academic career led to her study Biochemistry at Oxford and complete a PhD at University College London. However, when she developed severe chemical sensitivities, she began to consider opportunities outside the lab. In 2002 she joined the Royal Academy of Engineering as a policy adviser. She describes the Academy then as being "quite a sleepy organisation". Wanting to progress, she went to Westminster, becoming a specialist supporting the House of Commons Select Committee on Science and Technology and working in the Department for International Development.

Returning to the Academy in 2006 as Head of International Activities, Hayaatun led their partnership with African countries, working on sustainable futures for the developing world, and on skills and capacity needs. By 2011, she had become Director of Programmes and Fellowship, and in 2018 was

appointed CEO, the first woman and the first person to come from a minority ethnic group in that role.

If the Academy was “sleepy” in 2004, it certainly isn’t now. Hayaatun has promoted a vision of harnessing the power of engineering and technology to build a sustainable society and an inclusive economy that works for everyone – a vision that resonates so strongly with ours at Newcastle. She has ensured the vision is not an abstract strapline but has transformed the Academy into so much more than a community of fellows.

Developing the Academy’s role as a promotor of innovation and enterprise, she helped found the first Enterprise Hub at the Academy which has since equipped over 100 leaders and helped 140 start-up businesses create 1400 new jobs and secure £660m in funding.

When the profession of engineering is still sometimes seen through the smoky lens of the industrial revolution, the Academy’s ‘This is Engineering’ campaign has presented a positive image of the range of jobs that engineers have. With videos viewed 28 million times, 90% by 13-17 year olds with an even gender split, the campaign itself has been an inspiration to engagement efforts well beyond Engineering.

Hayaatun’s passion for diversity and inclusion is both personal and professional. It has also been described as “infectious”. With just 12% of engineers female and just 9% from black and minority ethnic backgrounds, there is so much to do, and Hayaatun has been tireless in challenging the status quo. Most recently, she worked alongside Sir Lewis Hamilton in “co-driving” the Hamilton Commission on improving representation of black people in UK motorsport. Reading the Commission’s report, it’s clear how much opportunity for change lies with us in universities.

Hayaatun has been named as one of the most 'Inspiring 50 Women in Tech' and one of the most influential women in engineering. She was created CBE in 2020 for services to international engineering and has received a Suffrage Science Award and just recently the biennial president's prize of the Engineering Professors' Council. She holds honorary degrees from Imperial College and University College London, and an honorary fellowship from Queen's College, Oxford.

She describes herself as a relentless optimist and her style as "work in progress leadership". This self-aware leader has been open about the steps she has taken and the mentorship and help she has sought in the chapters of her career. She says that "I have had to work at shifting myself to a position where I am comfortable having the spotlight on me", so I will ask her to remain in this virtual spotlight for just a moment longer.

Catriona Schmolke, a Newcastle graduate, who is a Vice President and Trustee of the Academy, says that "Hayaatun really embraces the role of CEO. She has transformed the existing operations and plotted an extremely dynamic path forward. ... On a day-to-day basis Hayaatun has mastered the art of being omnipresent with grace and is so supportive of all who work with or for her. To watch how she interacts in meetings is to observe the very definition of professionalism and promotion of an inclusive culture."

Thinking on the critical role that engineers have had in the last few years, Professor Phil Blythe, who was Chief Scientific Adviser at the Department for Transport when the pandemic began, tells me that "Hayaatun positioned the Royal Academy of Engineering to be the first port of call ... in the early days of the pandemic and when formulating our responses. ... Engineering really stepped up to the challenge."

Chancellor Dharker, for her championing of engineers present and future, and for her commitment in action to the positive, joyful vision of an engineering community that is truly diverse and in which everyone can flourish, I invite you to admit Hayaatun Sillem to the degree of Doctor of Engineering *honoris causa*.

Citation by Professor J S Fitzgerald, Public Orator

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