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THE NATIONAL
ROBOTARIUM
PEOPLE CENTRED :: INTELLIGENCE DRIVEN

SPOTLIGHT ON :: THE NATIONAL ROBOTARIUM'S COLLABORATIVE APPROACH TO ROBOTICS INNOVATION



The National Robotarium's CEO, Stewart Miller

The National Robotarium's new CEO Stewart Miller spoke to Robotics & Innovation Magazine about the facility's unique approach to accelerating robotics and AI research.

When the new National Robotarium building opens next year, it will be the largest and most advanced robotics and AI research facility in the UK. But it's the centre's ethos that makes it truly stand out: a collaborative approach means researchers join forces with industry partners to develop AI and robotics solutions for real-world challenges. Projects already underway include collaborations with the social care, healthcare, offshore energy and laser manufacturing sectors.

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interact with robots. In a recent project, National Robotarium researchers partnered with care homes in Scotland to trial the use of an AI-powered telepresence robot to facilitate remote doctor's appointments for residents.

By connecting roboticists across the UK, building public trust and adding a touch of business savvy, the UK can punch above its weight in robotics research.

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NEWS ROUND UP



Professor Letizia Jaccheri, Action Chair EUGAIN,
Claire Ordoyno, Business Development Executive at the CDT and
Professor Enrico Nardelli, President, Informatics Europe

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Organised by Informatics Europe, the award was given in recognition of the CDT's outstanding support in recruiting and retaining gender diverse students for advanced graduate study. The award carries a prize of €5,000, which will be invested into further promoting gender equality.

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Centre for Doctoral Training PhD graduates Daniel Angelov and Svet Penlov joined UC Berkeley SkyDeck's Accelerator Programme. The team won a place with their startup Efemerai, a platform for continuously testing and improving machine learning.

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The National Robotarium took part in Build UK's Open Doors Week, joining an effort to broaden knowledge of careers in the construction industry.

Thanks to Robertson Group, members of the public were able to safely visit the National Robotarium building under construction. For those who missed out, check out the timelapse of the building work.

WATCH TIMELAPSE



National Robotarium researchers took part in the 'Borrow a Researcher' programme to visit West Lothian Libraries and run talks and activities related to their research. Sessions included Gavin Abercrombie on 'AI and online abuse' and Dr Mauro Dragone teaching how to code 'robot pets'

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CEO Stewart Miller sat down with The Herald to discuss the many ways robots can be used in the real world. Dismantling fears derived from science fiction, Stewart highlighted the benefits of robotics and AI in tackling global challenges

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CENTRE FOR DOCTORAL TRAINING :: Student Spotlight

Ronnie Smith

PhD student in Robotics and Autonomous Systems

What does your research entail?

The ability to recognise the Activities of Daily Living (ADLs) that someone is performing at home is fundamental to providing intelligent and autonomous

recognition systems, which often rely on fixed sensors placed throughout the living environment, as additional sources of information. Humans and robots can provide unique types of information, which can be accessed using a combination of machine learning and knowledge engineering-based techniques. For instance, we can gather some information directly from the user about their activities through conversation with a virtual agent, while a mobile robot can seek out information in the living environment.

How do you expect your research will impact society?

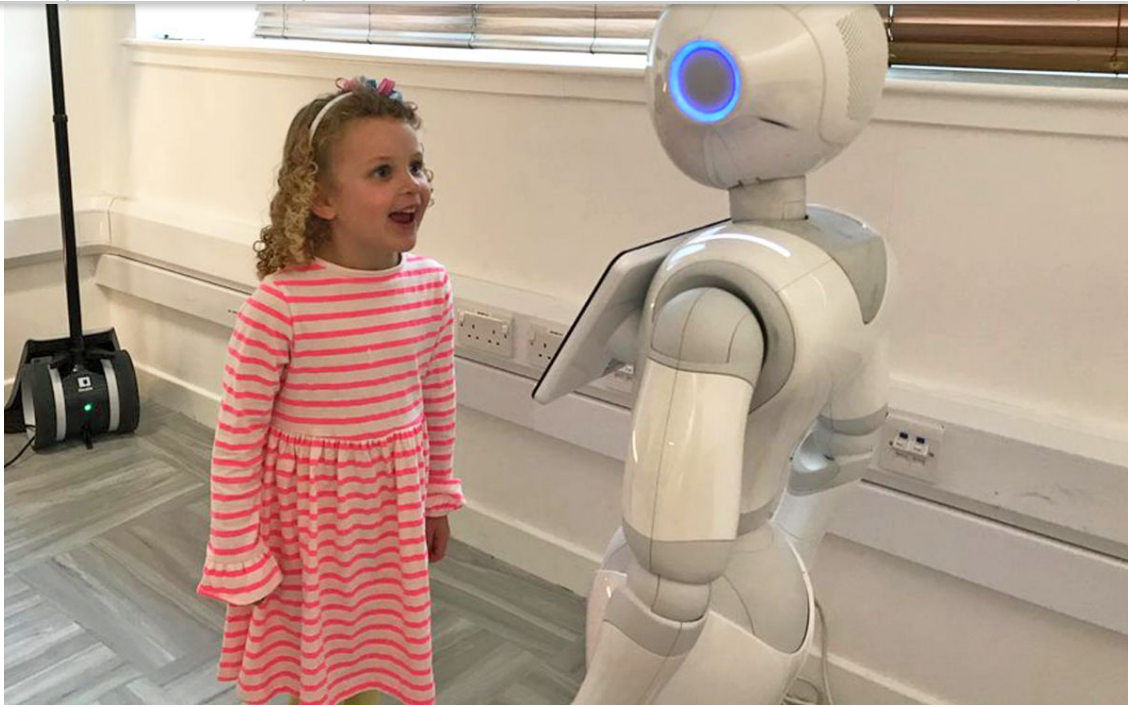
I hope my research will offer insight into ways we can avoid over-reliance on supervised learning in activity recognition, which is time and resource intensive for stakeholders. One thing we can do is use robotics to help learn about the environment and collect information from users. In this sense, I hope my research will play a small part in making assistive technology more accessible, enabling more people to live comfortably at home as they age.

What's the biggest challenge you face in your research?

Activity recognition generally relies heavily on having realistic sample data to inform the design of our approaches and for training. There aren't many existing datasets on multi-modal activity recognition that incorporate robot sensing. As a result, it is time-consuming as we collect much of the data we need in our Robotic Assisted Living Testbed. If we want to focus on making our approaches more widely applicable in the future, it is important to carefully consider the information we need to collect and how we can effectively capture it in a way that does not tie a single approach too closely to one specific environment.

How did you become interested in robotics?

I started working with technology for assistive living during the final year of my undergraduate degree, where I was first exposed to the idea of a live-in assistive companion robot. I see robotics like this as useful tools to supplement human-provided care, with specific capabilities that can not only enable people to live independently for longer, but which can free up human resources to focus on the more personal aspects of care.



A young visitor interacts with a Heriot-Watt robot

Bitesize

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Once our new building is up and running come visit our Education Hub!

The new National Robotarium building will host an Education Hub, dedicated to engaging young people and communities in robotics and AI research. Open days, school trips and other events will be organised to encourage young people to consider the career possibilities offered by robotics.

If you know a young person interested in robots, get them to read about our new building and careers in robotics on CBBC Newsround!

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YOUR CHANCE TO GET INVOLVED

If your organisation or school would like to get involved in the work of the National Robotarium, whether to tackle an industry problem or engage young people in robotics research, we'd love to help!

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