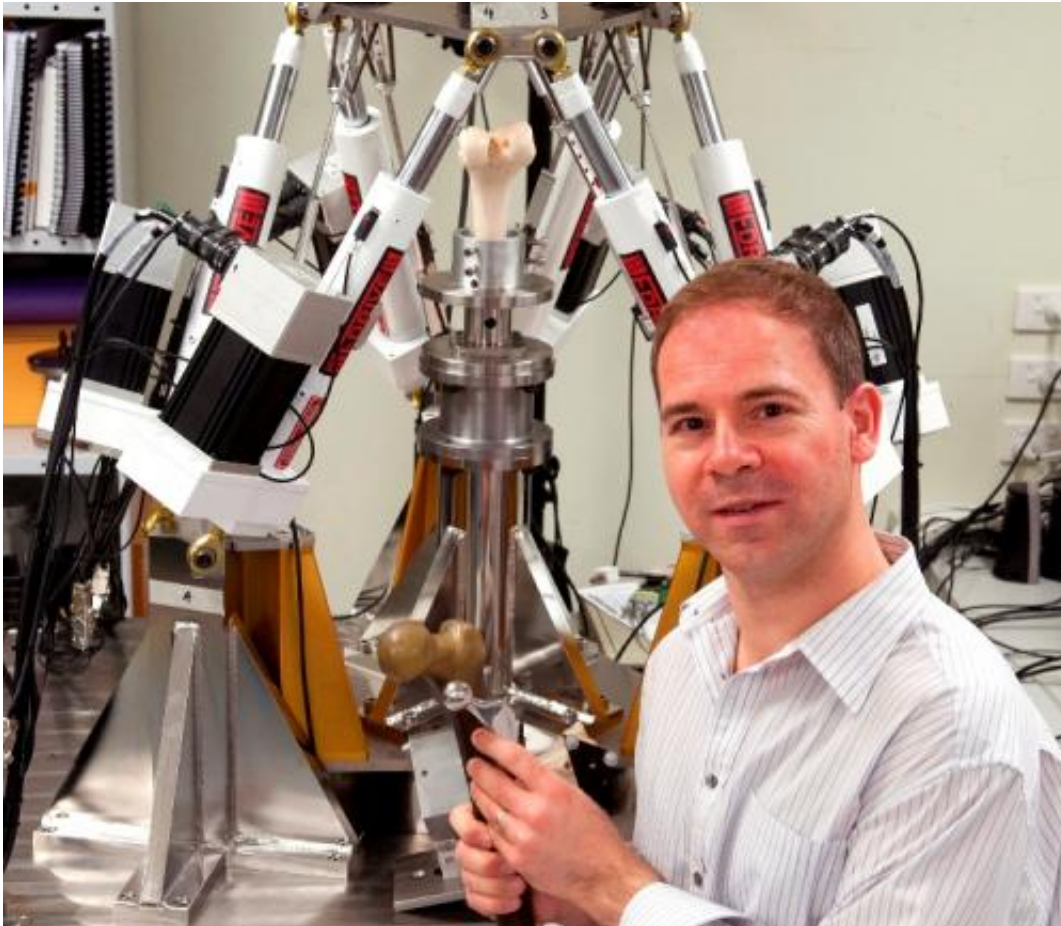


# Hexapod Robot wins engineers' high praise

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It has a fantastical, science fiction look, but its real-life applications for biomedical research have seen the Six Degree of Freedom Hexapod Robot win the SA Engineers Australia 2012 Excellence Award.

The robot, based at The Medical Device Research Institute at Flinders, was developed to enhance understanding of the 3D performance of normal and diseased joints and their artificial replacements by simulating complex joint motion.

The [Hexapod Robot](#) team, led by Flinders biomechanical engineer Dr John Costi (pictured here with the Hexapod Robot), includes researchers from The University of Adelaide's School of Mechanical Engineering.

Announcing the award at a ceremony on September 21, Engineers Australia SA President Mr Gerry Doyle praised the robot for the sophistication of its design and its designers for their problem-solving abilities.

The Dean of the School of Computer Science, Engineering and Mathematics at Flinders, Professor John Roddick, said that the success was "a demonstration of the University's growing strengths in mechanical engineering, which has developed rapidly since it started at Flinders in 2009".

Based on the Stewart Platform – a classic, proven design for "six [degree of freedom](#)" position and motion control widely used in flight simulators and theme park rides – the Hexapod Robot allows for improved understanding of how bones, joints and components function and why they fail.

"The Hexapod Robot very precisely simulates people walking, bending, twisting and lifting to within fractions of a millimetre, which allows researchers to determine the force placed on joints from repeated movements or actions," Dr Costi said.

"Receiving this award is an honour and of particular importance is the recognition of this collaborative project amongst other traditional

engineering disciplines."

Dr Costi thanked Foundation Daw Park for providing the initial funding to commence the project.

In addition to [medical applications](#), potential users of the Hexapod Robot include car part manufacturers and workplace designers or any area where complex, precise, 3D motions are required.

The Hexapod [Robot](#) now becomes eligible for the 2012 National Engineering Excellence Award, which will be announced in Canberra in November.

**More information:** [blogs.flinders.edu.au/flinders ... -to-study-of-joints/](http://blogs.flinders.edu.au/flinders...-to-study-of-joints/)

Provided by Flinders University

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