

College of Fellows Young Researcher Award
CITATION
Associate Professor Amir Patel
Department of Electrical Engineering

Associate Professor Amir Patel is a robotics engineer with over 13 years of experience in both industry and academia. His research involves studying the manoeuvrability of robotic and biological systems. This sparsely investigated frontier of research has necessitated a multi-disciplinary approach which employs techniques from robotics such as dynamic modelling, feedback control, novel sensor development, trajectory optimisation and physical robotic design.

In 2008, after completing a BSc Eng (Mechatronics) at the University of Cape Town (UCT), Dr Patel was employed as a senior software developer at Tellumat Defence where he developed flight control systems for autonomous aircraft. During this time, he also completed an MSc (Electrical Engineering) at UCT (2010–2011) part-time in the area of collision avoidance.

In 2012, he was appointed as a full-time assistant lecturer in the Department of Electrical Engineering at UCT, where he also enrolled in a PhD. He completed his PhD in 2015 and was appointed as a lecturer in the department and was subsequently promoted to senior lecturer in 2017. In 2018 he was awarded an Oppenheimer Memorial Trust Fellowship and was appointed as a Visiting Research Fellow in the Robotics Institute at Carnegie Mellon University (January–June 2018) and then again in the Laboratory for Computational Sensing & Robotics (LCSR) at Johns Hopkins University (July–December 2018).

He has been invited to deliver plenary talks at the annual meetings of the Society of Experimental Biology (SEB), International Society of Posture and Gait Rehabilitation (ISPGR), Society of Integrative & Comparative Biology (SICB), Dynamic Walking and the Canadian Society of Biomechanics (CSB). His 2019 *Robotics & Automation Letters* paper was the runner-up for best paper by the IEEE Technical Committee on Model-based Optimization for Robotics.

In 2021 he was rated Y1 by the NRF and was named as one of only two Africans to receive the Google Research Scholar award which is focused on funding world-class research conducted by early-career professors. In 2021 he was also successful in the highly competitive Royal Society Future Leaders African Independent Researchers (FLAIR) Fellowship scheme.

He is currently the convenor for the mechatronics undergraduate programme (the largest programme in the department) and the Director of the African Robotics Unit (ARU) at UCT.