Task Space Control of Multilink Cable Robots

Abstract: Multi-Link Unilateral Manipulators (MUAM) are a class of mechanisms characterised by multiple rigid links actuated by a parallel arrangement of unilateral actuators. Recently, these mechanisms have gained attention due to their possessing similar features to the musculoskeletal system, making them suitable for anthropomimetic robot analysis. To properly apply these mechanisms to tasks including manufacturing and rehabilitation it is necessary to consider the problem of end effector control given unilateral force constraints and redundancy in both actuation and the mechanism structure. This presentation will provide an overview of my recent work in addressing this problem.

Short bio: Jonathan Eden received his Bachelor degree in electrical systems at the University of Melbourne. He later received a Master's degree in Mechatronic Engineering from the University of Melbourne. Jonathan is currently a PhD student at the Melbourne University Robotics lab his research focusses on the control and analysis of Multi-link cable driven robotics.