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A ROBOTIC ARM



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TECHNOLOGY READINESS LEVEL (TRL)

- TRL 3

PATENT/ GRANTED NUMBER

- MY-169598-A

▶ TECHNOLOGY OVERVIEW

The present invention relates to an intelligent robot arm with multiple degrees-of-freedom, particularly for playing table tennis. The robot arm includes a mechanical system having a plurality of joints, at least one joint including at least one sensor and at least one actuator, such that in use, the position of the at least one actuator is detected by the at least one sensor; a camera system included in the mechanical system for optically detecting and tracking a moving target that is thrown towards the mechanical system; a measurement signal interface for detecting digital PWM output from the at least one sensor, the output being extracted by a microcontroller using timer

interrupt; the microcontroller containing a PID control algorithm for providing control output to the at least one actuator through a DC H-bridge driver included in an output signal interface; and a main controller board interfaced with the microcontroller for providing reading of motor positions from inverse kinematics calculation.

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