Robo F-Pads

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With the common occurrence of concussions in the sports world, there should be a way through technological means to stop or reduce the risk of receiving a concussion. The Robo F-Pads shoulder pad/helmet system design investigates the idea of reducing concussions and other head and neck injuries. By adding a battery powered Arduino Uno micro-controller, with wireless capabilities, to an already modified shoulder pad/helmet system, any impact that occurs with the system activates control stabilizers around the neck of the user to reduce extreme head and neck movement. Ultimately, through research, design, engineering and experimentation, there are replicable results to confirm that the addition of this simple and inexpensive micro-controller is a vital factor in the success of this concussion reducing shoulder pad-helmet system.

Awards Won:

Third Award of $1,000

Society for Experimental Mechanics, Inc.: Third Award of $500

Office of Naval Research on behalf of the United States Navy and Marine Corps: Second Award of $1,500