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Simulation and fabrication of neuromuscular biohybrid swimmers[1] MATTIA GAZZOLA, ONUR AYDIN, XIAOTIAN ZHANG, TAHER SAIF, University of Illinois, Urbana-Champaign — Biohybrid machines have been developed using muscles to actuate soft robotic structures. The integration of neurons into the embodiment of such systems can transform them into intelligent machines able to adaptively respond to environmental cues. This relies on the ability of neural units to command muscle activity, making actuation through motor neurons the first milestone. Here, we achieve this milestone, and demonstrate neuromuscular actuation of a computationally designed biohybrid swimmer.

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