Robotic fish designed to perform escape maneuvers

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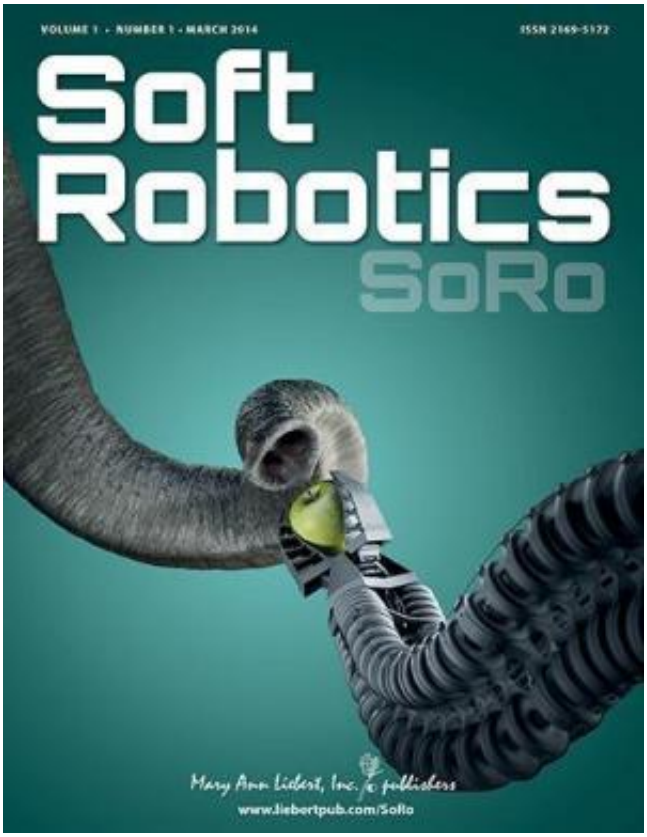

A soft-bodied, self-contained robotic fish with a flexible spine that allows it to mimic the swimming motion of a real fish also has the built-in agility to perform escape maneuvers. The innovative design and capabilities of this complex, autonomous robot is described in Soft

Robotics (*SoRo*).

Andrew Marchese, Cagdas Onal, and Daniela Rus, from MIT (Cambridge, MA) and Worcester Polytechnic Institute (Worcester, MA), describe the design, modeling, fabrication, and control mechanisms of the robotic fish in the article "Autonomous Soft Robotic Fish Capable of Escape Maneuvers Using Fluidic Elastomer Actuators". A novel fluidic actuation system, embedded muscle-like actuators, and an onboard control system give the fish autonomy and the ability to perform continuous forward swimming motion and rapid accelerations.

"This innovative work highlights two important aspects of our emerging field; first it is inspired and informed by animal studies (biomimetics), and second it exploits novel soft actuators to achieve life-like robot movements and controls," says Editor-in-Chief Barry A. Trimmer, PhD, who directs the Neuromechanics and Biomimetic Devices Laboratory at Tufts University (Medford, MA).

More information: The article is available free on the *Soft Robotics* website at http://www.liebertpub.com/soro.

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