“Hybrots:
Using cultured neurons to control robots and study learning and brain-style information processing”

What changes about your brain when you learn something? When you forget? How do brains compute? How can brain-style computation be used in artificial systems? The Potter Group, part of the Laboratory for Neuroengineering at Georgia Tech, has developed a variety of new technologies for interfacing to the nervous system, to help answer such questions. They grow cultures of brain cells on multi-electrode arrays, and use them to control simulated or robotic animals (“animats”). By observing these living neuronal networks using multiphoton optical microscopy, they hope to observe the cellular and network-level changes that underlie learning, forgetting, and brain-style computation.

For more information, see http://neuro.gatech.edu.

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