

11:00 — 12:45 Saturday — Minicourse MacGyver on the Hudson

Inexpensive and widely available build-it-yourself technologies — like the Arduino ecosystem of embedded computers, sensors, and actuators; the Parallax kits for building robots; and many kits for building aerial drones — give us, as mathematics educators, the opportunity to teach mathematics in exciting settings and to prepare our students to make better personal and public policy decisions about the developing symbiosis between humans and robots. Participants in this workshop will build and program various devices using the Arduino ecosystem and a Parallax robot kit and classroom-ready materials. Everything we use is available for a total under \$300.00 with some money to spare. Presenters: Ben Minden, Matthew Mogensen, Frank Wattenberg, and Drew Wilkerson.

<u>Course Ready Materials</u>			
<u>Robot Projects</u>		<u>Small Projects</u>	
<u>Robot Part 1</u>	<u>Robot Camera</u>	<u>Range Sensor</u>	<u>Level</u>
<u>Robot Part 2</u>	<u>Robot Pan Tilt</u>	<u>Atmospheric Sensor</u>	<u>Range Sensor</u>
	<u>Tester</u>	<u>Digital Level</u>	<u>Adv Range Sensor</u>
			<u>Stripped</u>
			<u>Temperature and Pressure</u>
			<u>Wire test</u>