MiniRHex: An Open-source Walking Hexapod Flowers, Nikolai

This talk presents the design and capabilities of MiniRHex, a \$200 hardware platform for robotics research and outreach. In addition to educational goals, the platform provides us with an opportunity to study the scaling of locomotion principles. By modifying the control strategies currently utilized in RHex, we have been able to develop an affordable and easily-constructed version that still offers many of the same capabilities as its full-scale cousin. Some features include a rugged frame and stable stance that allow it to traverse moderate to rough terrain and a highly configurable software package that can be modified to add new behaviors and abilities. MiniRHex is designed to lower the entry barrier to dynamic gait research and allow researchers to test novel algorithms on a physical machine without the risk or expense of a full-scale platform.