ABSTRACT: Ants navigate the world running at high speeds and over a variety of surfaces. However, ant-scale robots have paled in comparison to their biological counterparts, walking at slow speeds (< 1 body length/sec), and only over flat terrain. This talk will present progress in the design and manufacture of microrobot mechanisms utilizing microfabrication processes incorporating a range of materials with varying moduli. Bringing together new manufacturing processes with insights into locomotion at ant-scales paves the way for dynamic microrobots. Results include magnetically actuated legged microrobots from 1 gram down to 1 milligram that provide insights into simple design and control for high speed locomotion in small-scale mobile robots.