Professor Bekey's talk will cover the history and current development of robotic aids to human locomotion, arm movement and hand function. The use of devices and systems to enable amputees and people with partial paralysis to walk has a long history, from the "peg legs" used by pirates to current computer-controlled legs. The U.S. government has recently announced a $30 million program entitled "Revolutionizing Prosthetics" to develop a new generation of artificial arms with the full functionality of the living arm. Robotic devices are currently used to assist in the rehabilitation of stroke patients and persons recovering from major accidents, as well as actual replacements for legs, arms and hands. In this talk, Dr. Bekey will discuss the issues, problems and current trends in rehabilitation robotics.