



State of the Art in Robotic Leg Prostheses: Where We Are and Where We Want to Be

Workshop website: <https://belab.mech.utah.edu/iros2020/>

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In this talk, Dr. Thomas Sugar will present his latest results in developing advanced powered prostheses that restore biological gait to people with lower limb amputation. Over many years Dr. Sugar has developed high functioning, robust, and practical powered limbs in collaboration with his startup SpringActive. Powered prostheses built at SpringActive have successfully realized full ankle normalization by providing all of the energy seen in human gait. The prosthesis marketplace is competitive and demanding, requiring that devices be lightweight with long battery life. Novel actuation approaches, accurate engineering models, and intuitive control methodologies are critical to meeting the value proposition of the market. Funding support from the SBIR program has and continues to be instrumental in the R&D process.