BALL STATE UNIVERSITY

The Mathematical Laws of Morphology and Biomechanics

Tuesday 22nd March 2022 noon EDT

Virtual Presentation: https://purdue.webex.com/meet/aselvite

PURDUE FORT WAYNE

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Pushing movement further: can simplification help us identify what defines locomotion success?

Our locomotor systems are composed of complex multi-faceted components that result in high redundancy. Therefore, due to the very nature of the neural-musculoskeletal system, defining the underlying control across all movement remains elusive – but it is this understanding that has the potential to strengthen and broaden our applications in assistive devices, robotics and health interventions. Here, I will discuss how simplifying the locomotor system to a jointless leg and point mass, and using complex tasks, may provide a route to defining gait improvements or identifying pathological gait.

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