Abstract Submitted
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Central Pattern Generators for Quadrupedal Arboreal Locomotion of Chipmunks [Tamias Sibiricus] ULRICH ZURCHER, ALEXANDRA POWERS, Physics Department, Cleveland State University, ANDREW LAMMERS, School of Health Sciences, Cleveland State University — Locomotion requires to coordinated periodic movements of muscles and ligaments, which in turn requires periodic firings of neurons. The patterns are self-generated and do not depend on external stimulus. The corresponding oscillators are known as central pattern generators [CPG]. The CPGs for fore- and hind limb movement have been studied quite extensively in the literature. We focus on CPGs for the motion of the trunk, head, and tail of chipmunks. We observe wave-like behavior, which generates the angular momentum about the mediolateral axis necessary for dynamic, rather than static, stability.

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