

Abstract Submitted  
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**Locomotion of *C. elegans* through jammed granular media** KEVIN LU, PAULO E. ARRATIA, University of Pennsylvania — It is quantitatively demonstrated in this experiment on the undulatory swimming of *C. (Caenorhabditis) elegans* that, in a highly-resistive media, the animal only executes beating frequencies and amplitudes in discrete values. This behavior of *C. elegans* is inferred from the peaks in the particle velocity distributions where the most probable velocities match the transverse velocities of the nematode body. The behavior in the velocity distribution is more pronounced for particles in denser arrangements and for those closer to the thrashing gait of the worm. These results contribute to the existing data on the worm locomotion and further facilitate the identification of the endogenous genes and neural circuitry to the exogenous behavioral responses of *C.elegans*.

Kevin Lu  
University of Pennsylvania

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