

Abstract Submitted
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Falling Maple Seed: The mechanism for its spin Z. JANE WANG, Cornell University, KAPIL VARSHNEY, SONG CHANG, Cornell University — A maple seed falls in a characteristic downward spiral. One explanation of its spinning motion is the auto-rotational effect. As the seed falls, the aerodynamic torque on the feather will cause it to spin like a wind-mill. However, the film of a falling seed shows that its spinning motion precedes the steady descent. And surprisingly, the seed with little feather can also spin. We experimentally quantify the kinematics of falling seeds with different shapes. The analysis of the coupling between the rigid body dynamics and the aerodynamics offers a new explanation for the cause of the spin.

Z. Jane Wang
Cornell University

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