

***Biophysics and Systems Biology
Seminar Series***

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Flight of synthetic whirling fruits

Abstract: Wind dispersion of seeds is a widespread evolutionary adaptation found in plants, which allows them to multiply in numbers and to colonize new geographical areas. Appendages of seeds, fruits and other diaspores (dispersal units) are essential for their wind dispersal, as they act as wings and enable them to fly. Whirling fruits generate an auto-gyrating motion from their sepals, a leaf like structure, which curve upwards and outwards, creating a lift force that counteracts gravitational force. In this talk, I will present how we have combined a simple theoretical model and experiments to understand how the shape of the wings of whirling fruits may have evolved into a form optimal for its wind dispersion potential, i.e., a maximal flight time/minimal terminal descent velocity. Similar shapes are found for a wide range of whirling fruits collected in the wild, highlighting that wing curvature (fold angle) can aid wind dispersal of whirling fruits and may improve the fitness of their producers in the context of an ecological strategy.

**Thursday, May 2nd, 2019 at 10:00AM
Natural Sciences II 1201**

Hosts: Matt Bovyn and Professor Jun Allard

**If you're interested in meeting with Dr. Carlson, please contact Jun Allard
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