# THESIS DEFENSE

SHASHWAT SPARSH

# DATA DRIVEN ANALYSIS OF SAMARA SEED KINEMATICS AND DYNAMICS


## ABSTRACT

Samara Seeds are the subject of aerodynamic and biological studies due to their auto-rotating behavior and passive stability. The transition regime of these seeds and their relationship between morphology has remained unexplored.

This thesis aims to employ a data-driven approach to characterize the trajectory, kinematics, and dynamics of Tipuana Tipu samaras during descent.


## QUESTIONS

**Do single-bladed auto-rotating seeds truly support the claim of effective seed dispersal?**

**What morphological parameters influence the transition time of these seeds?**

**WEDNESDAY**
**4 JUN 2025**

9:00 AM

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