

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

6.5160J, 8.351J, 12.620J

Classical Mechanics: A Computational Approach

Problem Set 11—Fall 2024

Issued: 20 November 2024

Due: 6 December 2024

Note: Project 5 is also due on Friday, 6 December 2024

Reading: SICM2 Chapter 5 Section 5.4 through Chapter 6 Section 6.2

## Introduction

The reading this week is a long story about machinery. Mixed-variable generating functions, Hamilton-Jacobi theory, and the canonical transformations that result from time evolution are needed to support our goal of understanding phase-space structure using perturbation theory.

## Exercises

- Exercise 5.12: Construction of Generating Functions SICM2 page 393
- Exercise 6.4: Uniform Acceleration SICM2 page 425

This is the last problem set!  
:-)

Please get all your work in so we can give you grades!

Remember: The problem sets and projects are the only requirements for this class.