

# Contents

## *Introduction*

### *Optional Introductory Non-Examinable Project*

- 0.1 Root Finding in One Dimension

### *Core Projects*

- 1.1 Ordinary Differential Equations
- 1.2 Golden Section Search for the Mode of a Function

### *Additional Projects*

- 2.1 The Restricted Three Body Problem
- 2.2 Equipotentials in a Parallel Plate Capacitor
- 2.3 Continued Fractions
- 2.4 Computational Hypothesis Testing

For maximum credit, you should attempt both projects from section 1 (*Core Projects* above), and then two additional projects chosen from section 2 (*Additional Projects*). You may not attempt more than two additional projects. All projects carry equal credit.