

**Institute of Applied Mechanics
National Taiwan University**

Advanced Dynamics 高等動力學 (D4010)

Fall 2009

Prof. Li-Sheng Wang (王立昇)

Office: IAM414, 33665686, 0937924516, wangli@iam.ntu.edu.tw

Outline:

1. The Variations
2. Lagrangian Mechanics
3. Hamilton Equations of Motion
4. Canonical Transformation
5. Hamilton-Jacobi Theory
6. Perturbation Theory
7. Stability Analysis

References:

1. H. GOLDSTEIN, Classical Mechanics, 3rd Ed., 2003, Addison - Wesley Publishing Company, Inc.
2. V.I. ARNOLD, Mathematical Methods of Classical Mechanics, 1978, Springer-Verlag, New York.
3. 陳濱, 分析動力學, 1989.

Grading: Midterm (40%), Final (45%), Homework (15%)