

543 M6110

FUNDAMENTAL OF FLUID DYNAMICS 流體力學導論

- (1) Introduction - Scope of Fluid Mechanics (1 hour).
- (2) The Basic Equations of Fluid Mechanics (12 hours).
- (3) Some Exact Solutions for Illustrating Various Terms of the Equations (6 hours).
- (4) Similitude and Modeling (3 hours).
- (5) Potential Flow (6 hours).
- (6) Inertialess Flow (6 hours).
- (7) Laminar Flow (8 hours).
- (8) General Discussion on Other Topics in Fluid Mechanics (3 hours).

Textbook : James A. Liggett, 'Fluid Mechanics', McGraw-Hill, 1994.

References :

- (1) Ronald L. Panton, 'Incompressible Flow', John Wiley & Sons, 1984.
- (2) Frank M. White, 'Viscous Fluid Flow', 2nd ed., McGraw-Hill 1991.
- (3) D. J. Tritton, 'Physical Fluid Dynamics', 2nd ed., Oxford Univ. Press, 1988.

Grading :

- (1) Homeworks (40 %).
- (2) Midterm Examination (30 %).
- (3) Final Examination (30 %).