University of Bahrain جامعة البحرين

Guide to Resources in Fluid Mechanics

SCOPE: Fluid mechanics is the study of gases and liquids at rest and in motion, and dealing with pressures, velocities, and accelerations, including fluid deformation and compression or expansion. Fluid statics studies the behaviour of stationary fluids. Fluid dynamics studies the flow behaviour of moving fluids.

SUBJECT KEYWORDS: Fluid mechanics, fluid statics, fluid dynamics

BOOKS:

1. Dictionary of Physics McGraw-Hill, c2003. Call no.QC5.M4242003 (Location: SITL)
2. Crowe, C.T., D. F. Elger and John A. Robertson. Engineering Fluid Mechanics Wiley, c2005. Call no. TA357.C762005 (Location: Isa Town)
3. Mendes, A. C., M. Rahman and C. A. Brebbia. Advances in Fluid Mechanics V WIT Press/Computational Mechanics, c2004 Call no. QA901.A2822004(Location: SITL)
4. Shames, Irving Herman. Mechanics of Fluids McGraw-Hill, c2003 Call no. TA357.S442003 (Location: SITL & Isa Town)

JOURNAL DATABASES

1. Science Direct
2. Ei-Village 2

JOURNAL ARTICLES:

1. Cadou, J.M., M. Potier-Ferry and B. Cochelin "A numerical method for the computation of bifurcation points in fluid mechanics". European Journal of Mechanics - B/Fluids, Volume 25, Issue 2, March-April 2006, Pages 234-254. Full-text

2. Tezduyar, Tayfun E. and Ahmed Sameh "Parallel finite element computations in fluid mechanics". Computer Methods in Applied Mechanics and Engineering, Volume 195, Issues 13-16, 15 February 2006, Pages 1872-1884. Full-text
3. Hamouda, Makram; Jean Michel Rakotoson and Cédric Verbeke "Qualitative properties of some equations related to fluid mechanics". Nonlinear Analysis, Volume 60, Issue 3, February 2005, Pages 501-514. Full-text

WEBSITES:

1. Physics Demonstration List – Fluid Mechanics
   http://www.physics.lsa.umich.edu/demolab/fluidmech.asp

2. Overview of Fluid Mechanics Theory
   http://www.efunda.com/formulae/fluids/overview.cfm

3. Georgia State University: Hyperphysics.
   http://hyperphysics.phy-astr.gsu.edu/hbase/fluid.html

4. Fluid Mechanics Equations:
   http://www.engineeringtoolbox.com/fluid-mechanics-equations-d_204.html