

Third Year

B1: I. Flows, Fluctuations and Complexity, and II. Symmetry and Relativity

I. Flows, fluctuations and complexity

- 'Physical Fluid Dynamics', 2nd edition, D J Tritton, (CUP) 1988, ISBN-10: 0198544936*
- 'Elementary Fluid Dynamics', D J Acheson, (OUP) 1990, ISBN-10: 0198596790 *
- 'Introduction to Atmospheric Physics', D G Andrews, (CUP) 2nd edition 2010, ISBN-13: 9780521693189 (Chapter 3 on radiation only)*
- 'Non-linear Dynamics and Chaos', S. H. Strogatz, (Perseus), 1994, ISBN 0-7382-0453-6 (Chapters 1, 2, 6, 9, 11, 12)
- 'Probability, Random Variables and Random Processes (Schaum's outline)', H. P. Hsu, 1997, (2nd ed. 2010), ISBN 0-07-030644-3 (Chapters 2, 3, 5 & 6)
- 'Physical Biology of the Cell', R. Phillips, J. Kondev & J. Theriot (Garland Science, 2008) **
- 'Biological Physics: Energy, Information, Life', updated 1st edition, Philip Nelson (W.H.Freeman & Co Ltd, 2008)**

- 'Physical Biology of the Cell', R. Phillips, J. Kondev & J. Theriot (Garland Science, 2008) **
- 'Biological Physics: Energy, Information, Life', updated 1st edition, Philip Nelson (W.H.Freeman & Co Ltd, 2008)**
- 'Molecular and Cellular Biophysics', M. B. Jackson (CUP, 2006) **
- 'Biochemistry' 3rd Ed, D. Voet & J.G. Voet, (John Wiley & Sons Inc, 2005) OR
- 'Biochemistry', 6th Ed., L. Stryer, et al (W.H.Freeman & Co Ltd, 2006)
- 'Radiation and Climate', I M Vardavas and F W Taylor, (OUP), 2007
- 'Physical Fluid Dynamics', 2nd edition, D J Tritton, (CUP) 1988, ISBN-10: 0198544936*
- 'Fluid Dynamics for Physicists', T E Faber, (CUP) 1995, ISBN-10:0521429692 *
- 'Elementary Fluid Dynamics', D J Acheson, (OUP) 1990, ISBN-10: 0198596790 *

II. Symmetry & relativity

Special Relativity

- 'Six not-so-easy pieces: Einstein's relativity, symmetry and space-time', R P Feynmann (Allen Lane, 1998)
- 'Introduction to Special Relativity', W Rindler, (OUP) **
- 'Einstein's miraculous year', J Stachel (Princeton, 1998)
- 'The Special Theory of Relativity', Muirhead (Macmillan)
- 'An Introduction to Special Relativity and its applications', F N H Robinson, (World Scientific)**
- 'Introducing Special Relativity', W S C Williams (Taylor & Francis, 2002) ISBN: 9780415277624

B2: III. Quantum, Atomic and Molecular Physics, and IV. Sub-Atomic Physics

III. Quantum, atomic and molecular physics

- 'Atomic Physics', Chris Foot (Oxford Master Series in Physics) **
- 'Atomic & Quantum Physics', Haken & Wolf (Springer)
- 'Principles of Modern Physics', RB Leighton (McGraw Hill) *
- 'Quantum Physics of Atoms, Molecules, Solids, Nuclei and Particles', E Eisberg and R Resnick (Wiley)*

'Elementary Atomic Structure', G K Woodgate (Oxford) *
'Atomic Physics', J C Willmott (Wiley) Manchester Physics Series
Laser Physics, S Hooker and C Webb (Oxford Master Series in Physics)**
"The Physics of Quantum Mechanics" J Binney and D Skinner, (Cappella Archive
<http://www.cappella.demon.co.uk/cappubs.html#natsci>) *
'Principles of Lasers,' Orazio Svelto, (Plenum Publishing Corporation KLUWER
ACADEMIC PUBL)
ISBN10: 0306457482, ISBN13: 9780306457487
"Laser Physics" Hooker and Webb, ISBN13: 9780198506911, ISBN10: 0198506910

IV. Sub-atomic Physics

'Nuclear and Particle Physics: An Introduction', Brian R. Martin (Wiley, 2006) ISBN: 978-0-470-02532-1 **
'Introduction to Nuclear Physics', W N Cottingham & D A Greenwood, 2nd edition, (CUP, 2001) *
'Particle Physics', A Martin & G Shaw, (Wiley) *
'Modern quantum mechanics', Jun John Sakurai, San Fu Tuan, 2nd edition, Addison-Wesley Pub. Co., 1994
ISBN 0201539292, 9780201539295
'Nuclear and Particle Physics', W S C Williams, (OUP, 1997)
'Introduction to Nuclear and Particle Physics', A Das & T Ferbel, (Wiley)
'Introductory Nuclear Physics', P.E. Hodgson, E Gadioli and E Gadioli Erba., Oxford Science Publications, ISBN 0 19 851897 8 (paperback)

B3: V. General Relativity and Cosmology, and VI. Condensed-Matter Physics

V. General relativity and cosmology

"Gravitation and Cosmology", -Steven Weinerg (Wiley, 1972)
"Gravity- an introduction to Einstein's theory of general relativity", James Hartle (Addison Wesley)
"Spacetime and Geometry", -Sean Carroll (Addison Wesley)
"General Relativity- an introduction to physicists" , -Michael Hobson, G. Efstathiou and A. Lasenby (Cambridge)
'An Introduction to Modern Cosmology', A. R. Liddle (Wiley, New York)
'Cosmological Physics', J. A. Peacock (Cambridge University Press)
'Principles of Physical Cosmology', P. J. E. Peebles (Princeton University Press)
'The State of the Universe', Pedro G. Ferreira (Phoenix 2007)

VI. Condensed Matter Physics

'The basics of crystallography and diffraction', C Hammond (OUP)
'Introduction to Solid State Physics' C Kittel (Wiley) *
'Solid State Physics', J R Hook and H E Hall (Wiley) *
'The Solid State', H M Rosenberg (OUP) *
'Solid State Physics', N W Ashcroft and N D Mermin (Saunders)
'Solid State Physics', G Burns (AP)
'Solid State Physics', H Ibach and H Luth (Springer)
'States of Matter', David Goodstein (Dover publishing)