Relativity

View Online

This module is an introduction to Einstein's theories of special and general relativity. The first part of the module deals with special relativity, and is mainly about the strange dynamics that happen at speeds comparable to the speed of light. The second part develops the mathematical machinery needed to study the curvature of space-time and the subtle effects of gravity; this is the general theory of relativity. The third part deals with various consequences of the theory, and will touch upon topics like black holes and the big bang.

Choquet-Bruhat, Yvonne, Introduction to General Relativity, Black Holes, and Cosmology, First edition (Oxford: Oxford University Press, 2015) <http://ezproxy.library.qmul.ac.uk/login?url=http://www.vlebooks.com/vleweb/product/openreader?id=QMUL&isbn=9780191644528&uid=^u>

D'Inverno, R.A., Introducing Einstein's Relativity (Clarendon Press, 1992)

Faber, Richard L., Differential Geometry and Relativity Theory: An Introduction (New York: M. Dekker, 1983)

Rindler, Wolfgang, Relativity: Special, General, and Cosmological, 2nd ed (Oxford: Oxford University Press, 2006) <http://www.loc.gov/catdir/toc/fy0611/2006277893.html>

Woodhouse, N. M. J., General Relativity (London: Springer, 2007), Springer undergraduate mathematics series <http://www.loc.gov/catdir/toc/fy0705/2006926445.html>