

**GENERAL RELATIVITY  
RECOMMENDED BOOKS**

*(updated September 2020)*

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Weinberg, S  
Gravitation and Cosmology,  
Wiley Student Edition, 2008  
ISBN-10 : 8126517557  
ISBN-13 : 978-8126517558

[https://www.amazon.co.uk/Gravitation-Cosmology-Principles-Applications-Relativity/dp/8126517557/ref=sr\\_1\\_1?dchild=1&keywords=weinberg+gravitation&qid=1601218587&s=b&sr=1-1](https://www.amazon.co.uk/Gravitation-Cosmology-Principles-Applications-Relativity/dp/8126517557/ref=sr_1_1?dchild=1&keywords=weinberg+gravitation&qid=1601218587&s=b&sr=1-1)

Lightman, A. Press, W., Price, R. and Teukolsky, S.  
Problem Book in Relativity and Gravitation  
Princeton University Press, 2017  
ISBN-10 : 0691177783  
ISBN-13 : 978-0691177786

[https://www.amazon.co.uk/Problem-Book-Relativity-Gravitation-Lightman/dp/0691177783/ref=sr\\_1\\_5?dchild=1&qid=1601218205&refinements=p\\_27%3ASaul+A.+Teukolsky&s=books&sr=1-5&text=Saul+A.+Teukolsky](https://www.amazon.co.uk/Problem-Book-Relativity-Gravitation-Lightman/dp/0691177783/ref=sr_1_5?dchild=1&qid=1601218205&refinements=p_27%3ASaul+A.+Teukolsky&s=books&sr=1-5&text=Saul+A.+Teukolsky)

Landau, L.D. and Lifshitz, E.M.  
The Classical Theory of Fields: Volume 2 (Course of Theoretical Physics)  
Butterworth-Heinemann, 1980  
ISBN-10 : 0750627689  
ISBN-13 : 978-0750627689

[https://www.amazon.co.uk/Classical-Theory-Fields-Theoretical-Physics/dp/0750627689/ref=sr\\_1\\_1?dchild=1&keywords=landau+field&qid=1601218770&s=books&sr=1-1](https://www.amazon.co.uk/Classical-Theory-Fields-Theoretical-Physics/dp/0750627689/ref=sr_1_1?dchild=1&keywords=landau+field&qid=1601218770&s=books&sr=1-1)

*Books on mathematical aspects such as tensors, manifolds, Riemannian geometry etc*

Dubrovin, B.A. and Fomenko, A.T. and Novikov, S.P.  
Modern Geometry - Methods and Applications: Part I: The Geometry of Surfaces, Transformation Groups, and Fields (Graduate Texts in Mathematics)  
Springer, 2011  
ASIN : B017EYQN8W

[https://www.amazon.co.uk/Modern-Geometry-Applications-Transformation-published/dp/B017EYQN8W/ref=tmm\\_pap\\_swatch\\_0?encoding=UTF8&qid=&sr=](https://www.amazon.co.uk/Modern-Geometry-Applications-Transformation-published/dp/B017EYQN8W/ref=tmm_pap_swatch_0?encoding=UTF8&qid=&sr=)

Dubrovin, B.A. and Fomenko, A.T. and Novikov, S.P.  
Modern Geometry Methods and Applications: Part II: The Geometry and Topology of Manifolds: Part 2 (Graduate Texts in Mathematics)  
Springer, 1985

ISBN-13 : 978-0387961620  
ISBN-10 : 0387961623

[https://www.amazon.co.uk/Modern-Geometry-Methods-Applications-Mathematics/dp/0387961623/ref=tmm\\_hrd\\_swatch\\_0?encoding=UTF8&qid=&sr=](https://www.amazon.co.uk/Modern-Geometry-Methods-Applications-Mathematics/dp/0387961623/ref=tmm_hrd_swatch_0?encoding=UTF8&qid=&sr=)

Nakahara, M  
Geometry, Topology and Physics, Second Edition  
CRC Press, 2003  
ISBN-10 : 9780750306065  
ISBN-13 : 978-0750306065

[https://www.amazon.co.uk/Geometry-Topology-Physics-Graduate-Student/dp/0750306068/ref=sr\\_1\\_1?dchild=1&keywords=nakahara&qid=1601216068&s=books&sr=1-1](https://www.amazon.co.uk/Geometry-Topology-Physics-Graduate-Student/dp/0750306068/ref=sr_1_1?dchild=1&keywords=nakahara&qid=1601216068&s=books&sr=1-1)

Carroll, S  
Spacetime and Geometry: An Introduction to General Relativity  
Cambridge University Press, 2019  
ISBN-10 : 1108488390  
ISBN-13 : 978-1108488396

[https://www.amazon.co.uk/Spacetime-Geometry-Introduction-General-Relativity/dp/1108488390/ref=pd\\_bxgy\\_img\\_3/261-4018959-7052709?encoding=UTF8&pd\\_rd\\_i=1108488390&pd\\_rd\\_r=7e349e81-7f5f-4239-8457-40e154079fed&pd\\_rd\\_w=W5Fff&pd\\_rd\\_wg=EZs23&pf\\_rd\\_p=dcf35746-0212-418b-a148-30395d107b2d&pf\\_rd\\_r=CPAPX6NANM48Q58SE6W5&psc=1&refRID=CPAPX6NANM48Q58SE6W5](https://www.amazon.co.uk/Spacetime-Geometry-Introduction-General-Relativity/dp/1108488390/ref=pd_bxgy_img_3/261-4018959-7052709?encoding=UTF8&pd_rd_i=1108488390&pd_rd_r=7e349e81-7f5f-4239-8457-40e154079fed&pd_rd_w=W5Fff&pd_rd_wg=EZs23&pf_rd_p=dcf35746-0212-418b-a148-30395d107b2d&pf_rd_r=CPAPX6NANM48Q58SE6W5&psc=1&refRID=CPAPX6NANM48Q58SE6W5)

**Other recommended books:**

A. Zee,  
"Einstein Gravity in a Nutshell",  
Princeton University Press, 2013  
ISBN-10: 069114558X  
ISBN-13: 978-0691145587

J. Hartle,  
"Gravity: An Introduction to Einstein's General Relativity",  
Benjamin Cummings (January 5, 2003)  
ISBN-10: 0805386629  
ISBN-13: 978-0805386622

L. Ryder,  
"Introduction to general relativity",  
Cambridge University Press; 1 edition (July 6, 2009)  
ISBN-10: 0521845637  
ISBN-13: 978-0521845632

M. P. Hobson, G. P. Efstathiou, A. N. Lasenby,  
"General Relativity: An Introduction for Physicists"  
ISBN-10: 0521829518  
ISBN-13: 978-0521829519

B.Schutz [note the solution manual – see the next book]  
“A first course in general relativity”,  
Cambridge University Press; 2nd edition (June 22, 2009)  
ISBN-10: 0521887054  
ISBN-13: 978-0521887052

R.Scott,  
“A student’s manual for A first course in general relativity”  
Cambridge U. Press (2016)  
ISBN-10: 1107638577  
ISBN-13: 978-1107638570

C.Misner, K.Thorn, J.Wheeler, “Gravitation”,  
W. H. Freeman; 1973  
ISBN-10: 0716703440  
ISBN-13: 978-0716703440

S. Weinberg,  
“The first three minutes”,  
Basic Books; 2 Updated edition (August 18, 1993)  
ISBN-10: 0465024378  
ISBN-13: 978-0465024377

W.Pauli,  
“Theory of Relativity”  
Dover Publications Inc.;  
ISBN-10: 048664152X  
ISBN-13: 978-0486641522

D. Gorbunov and V. Rubakov,  
“Introduction to the theory of the early Universe: Hot Big Bang Theory”,  
World Scientific Publishing Company (February 15, 2011)  
ISBN-10: 9814343978  
ISBN-13: 978-9814343978

Ta-Pei Cheng  
“Relativity, Gravitation and Cosmology: A Basic Introduction”  
(Oxford Master Series in Physics) [Paperback]  
ISBN-10: 0199573646  
ISBN-13: 978-0199573646

A.Liddle  
“An Introduction to Modern Cosmology”, 2nd Edition  
ISBN-10: 0470848359  
ISBN-13: 978-0470848357

S.Carroll,  
“Spacetime and Geometry: An Introduction to General Relativity”,  
Benjamin Cummings (September 28, 2003)  
ISBN-10: 0805387323  
ISBN-13: 978-0805387322

J. A. Peacock  
"Cosmological Physics"  
(Cambridge Astrophysics) [Paperback]  
ISBN-10: 0521422701  
ISBN-13: 978-0521422703

P. Peebles  
"Principles of Physical Cosmology"  
(Princeton Series in Physics) [Paperback]  
ISBN-10: 0691019339  
ISBN-13: 978-0691019338

The State of the Universe [Paperback]  
Pedro Ferreira  
ISBN-10: 0753822563  
ISBN-13: 978-0753822562

D. MacMahon and P. Alsing,  
"Relativity demystified",  
McGraw-Hill Professional; 1 edition (December 2, 2005)  
ISBN-10: 0071455450  
ISBN-13: 978-0071455459

R. Lambourne,  
"Relativity, Gravitation and Cosmology",  
Cambridge University Press (July 26, 2010)  
ISBN-10: 0521131383  
ISBN-13: 978-0521131384

Yvonne Choquet-Bruhat,  
"Introduction to General Relativity, Black Holes and Cosmology"  
Oxford U. Press, 2015  
ISBN-10: 0199666466  
ISBN-13: 978-0199666461

**ADVANCED:**

R. Wald, "General Relativity"  
University Of Chicago Press; 1ST edition (June 15, 1984)  
ISBN-10: 0226870332  
ISBN-13: 978-0226870335

B. Schutz, "Geometrical methods of mathematical physics",  
Cambridge University Press; First Published edition (January 28, 1980)  
ISBN-10: 0521298873  
ISBN-13: 978-0521298872

Yvonne Choquet-Bruhat  
"General Relativity and the Einstein Equations"  
(Oxford Mathematical Monographs)  
ISBN-10: 0199230722  
ISBN-13: 978-0199230723

E.Poisson,  
"A relativist's toolkit",  
Cambridge University Press; 2007  
ISBN-10: 0521537800  
ISBN-13: 978-0521537803

Dmitry S. Gorbunov, Valery A. Rubakov,  
"Introduction To The Theory of The Early Universe: Cosmological  
Perturbations and Inflationary Theory" [Paperback]  
World Scientific Publishing Company (February 10, 2011)  
ISBN-10: 9814343781  
ISBN-13: 978-9814343787

Steven Weinberg,  
"Cosmology"  
OUP Oxford (21 Feb 2008)  
ISBN-10: 0198526822  
ISBN-13: 978-0198526827