

Ausgewählte Lehrbuchliteratur zur Vorlesung
Einführung in das wissenschaftliche Programmieren
im Modul

Computational Physics

Computational Physics & Scientific Computing

- P.L. DeVries, J.E. Hasbun, *A First Course in Computational Physics*, Infinity Science Press, 2010 (EUR 89,99)
- Bo Einarsson, *Accuracy and Reliability in Scientific Computing*, Society for Industrial Mathematics, 2005 (EUR 58,74)
- J.D. Faires, R.L. Burden, *Numerische Methoden – Näherungsverfahren und ihre praktische Anwendung*, Spektrum Akademischer Verlag, 2000
- W. Gander, J. Hrebicek, *Solving Problems in Scientific Computing Using Maple and MATLAB*, Springer, 2008 (EUR 64,15)
- N.J. Giordano, *Computational Physics*, Prentice Hall, 2005 (EUR 109,99)
- S.E. Koonin, D.C. Meredith, *Physik auf dem Computer 1 & 2*, Oldenbourg, 1990
- ✠ R.H. Landau, M.J. Páez, C.C. Bordeianu, *Computational Physics – Problem Solving with Computers*, Wiley-VCH, 2007 (EUR 119,00)
- R.H. Landau, M.J. Páez, C.C. Bordeianu, *A Survey of Computational Physics – Introductory Computational Science*, Princeton University Press, 2008 (EUR 63,99)
- R.H. Landau, *A First Course in Scientific Computing – Symbolic, Graphic and Numeric Modeling Using Maple, Java, Mathematica and Fortran90*, Princeton University Press, 2005 (EUR 53,99)
- T. Pang, *An Introduction to Computational Physics*, Cambridge University Press, 2010 (EUR 20,99)

- ✠ W.H. Press, S.A. Teukolsky, W.T. Vetterling, B.P. Flannery, *Numerical Recipes – The Art of Scientific Computing*, Cambridge University Press, 2007 (EUR 44,95)
- ✠ H.R. Schwarz, N. Köckler, *Numerische Mathematik*, Vieweg+Teubner, 2009 (EUR 44,90)
<http://www.springerlink.com/content/978-3-8348-0683-3>

Mathematische Methoden & Hilfsmittel

- ✠ M. Abramowitz, I.A. Stegun, *Handbook of Mathematical Functions*, Dover Publications, 1965 (EUR 26,95)
<http://www.convertit.com/Go/Convertit/Reference/AMS55.ASP>
- G.B. Arfken, H.J. Weber, *Mathematical Methods for Physicists*, Academic Press, 2005 (EUR 64,15)
- G.H. Golub, C.F. Van Loan, *Matrix Computations*, Johns Hopkins University Press, 1996 (EUR 37,80)
- K.F. Riley, M.P. Hobson, *Essential Mathematical Methods for the Physical Sciences*, Cambridge University Press, 2011 (EUR 49,99)

Programmiersprachen

- H. Benda, *Programmieren in Fortran 90 / 95*, Vorlesungsskriptum des Rechenzentrums der Universität Bayreuth
<https://srv.rz.uni-bayreuth.de/lehre/fortran90/>
- J.J. Barton, L.R. Nackman, *Scientific and Engineering C++: An Introduction with Advanced Techniques and Examples*, Addison-Wesley, 1994 (EUR 56,99)
- ✠ S.J. Chapman, *Fortran 95 / 2003 for Scientists and Engineers*, McGraw-Hill, 2007 (EUR 39,56)
- B.W. Kernighan, D. Ritchie, *The C Programming Language*, Prentice Hall, 1988 (EUR 28,95)