References

Each reference is followed, in square brackets, by a list of the page numbers where this reference is cited.

1. Alsmeyer, G. (1991) *Erneuerungstheorie.* Teubner, Stuttgart. *[71]*
2. Andersen, P.K., Borgan, Ø., Gill, R.D. and Keiding, N. (1993) *Statistical Models Based on Counting Processes.* Springer, New York. *[9]*
3. Asmussen, S. (1999) *Stochastic Simulation With a View Towards Stochastic Processes.* MaPhySto Lecture Notes. *[137,143]*
4. Asmussen, S. (2000) *Ruin Probabilities.* World Scientific, Singapore. *[130,137, 143,166,181]*
5. Asmussen, S. (2003) *Applied Probability and Queues.* Springer, Berlin. *[71]*
6. Asmussen, S., Binswanger, K. and Højgaard, B. (2000) Rare event simulation for heavy-tailed distributions. *Bernoulli* **6**, 303–322. *[143]*
7. Asmussen, S. and Rubinstein, R.Y. (1995) Steady-state rare events simulation in queueing models and its complexity properties. In: Dshalalow, J. (Ed.) *Advances in Queueing: Models, Methods and Problems,* pp. 429–466. CRC Press, Boca Raton. *[143]*
8. Barbour, A.D. , Holst, L. and Janson, S. (1992) *Poisson Approximation.* Oxford University Press, New York. *[138]*
9. Barndorff-Nielsen, O.E., Mikosch, T. and Resnick, S.I. (Eds.) (2002) *Lévy Processes: Theory and Applications.* Birkhäuser, Boston. *[18]*
10. Beirlant, J., Teugels, J.L. and Vynckier, P. (1996) *Practical Analysis of Extreme Values.* Leuven University Press, Leuven. *[97, 99]*
11. Bickel, P. and Freedman, D. (1981) Some asymptotic theory for the bootstrap. *Ann. Statist.* **9**, 1196–1217. *[141,146]*
12. Billingsley, P. (1968) *Convergence of Probability Measures.* Wiley, New York. *[15,146,161]*
13. Billingsley, P. (1995) *Probability and Measure.* 3rd edition. Wiley, New York. *[14,27,30,45,82,90,138,153,174]*

14. Bingham, N.H., Goldie, C.M. and Teugels, J.L. (1987) *Regular Variation.* Cambridge University Press, Cambridge. *[106,109,177]*
15. Björk, T. (1999) *Arbitrage Theory in Continuous Time.* Oxford University Press, Oxford (UK). *[148]*
16. Brockwell, P.J. and Davis, R.A. (1991) *Time Series: Theory and Methods.* 2nd edition. Springer, New York. *[39,174,199]*
17. Bühlmann, H. (1967) Experience rating and credibility I. *ASTIN Bulletin* **4**, 199–207. *[189,199]*
18. Bühlmann, H. (1969) Experience rating and credibility II. *ASTIN Bulletin* **5**, 157–165. *[189]*
19. Bühlmann, H. (1970) *Mathematical Methods in Risk Theory.* Springer, Berlin. *[86,189,212,214]*
20. Bühlmann, H. and Straub, E. (1970) Glaubwürdigkeit für Schadensätze. *Mittl. Ver. Schw. Vers. Math.* **73**, 205–216. *[213]*
21. Chambers, J.M. (1977) *Computational Methods for Data Analysis.* Wiley, New York. Wadsworth, Belmont Ca., Duxbury Press, Boston. *[90]*
22. Chossy, R. von and Rappl, G. (1983) Some approximation methods for the distribution of random sums. *Ins. Math. Econ.* **2**, 251–270. *[132]*
23. Cramér, H. (1930) *On the mathematical theory of risk.* Skandia Jubilee Volume, Stockholm. Reprinted in: Martin-Löf, A. (Ed.) Cramér, H. (1994) *Collected Works.* Springer, Berlin. *[155,166]*
24. Cressie, N.A.C. (1993) *Statistics for Spatial Data.* Wiley, New York. *[48,199]*
25. Daley, D. and Vere-Jones, D. (1988) *An Introduction to the Theory of Point Processes.* Springer, Berlin. *[52]*
26. Efron, B. (1979) Bootstrap methods: another look at the jackknife. *Ann. Statist.* **7**, 1–26. *[138,141]*
27. Efron, B. and Tibshirani, R.J. (1993) *An Introduction to the Bootstrap.* Chapman and Hall, New York. *[141,143]*
28. Embrechts, P., Grübel, R. and Pitts, S.M. (1993) Some applications of the fast Fourier transform algorithm in insurance mathematics. *Statist. Neerlandica* **47**, 59–75. *[130]*
29. Embrechts, P., Klüppelberg, C. and Mikosch, T. (1997) *Modelling Extremal Events for Insurance and Finance.* Springer, Heidelberg. *[52,65,82,102, 104,105,107,109–112,135,141,142,149,154,171,175,180]*
30. Embrechts, P. and Veraverbeke, N. (1982) Estimates for the probability of ruin with special emphasis on the possibility of large claims. *Insurance: Math. Econom.* **1**, 55–72. *[178]*
31. Fan, J. and Gijbels, I. (1996) *Local Polynomial Modelling and Its Applications.* Chapman & Hall, London. *[39]*
32. Feller, W. (1971) *An Introduction to Probability Theory and Its Applications II.* Wiley, New York. *[56,71,109,177,183,185]*
33. Gasser, T., Engel, J. and Seifert, B. (1993) Nonparametric function estimation. In: *Computational Statistics. Handbook of Statistics.* Vol. **9**, pp. 423–465. North-Holland, Amsterdam. *[39]*
34. Goldie, C.M. (1991) Implicit renewal theory and tails of solutions of random equations. *Ann. Appl. Probab.* **1**, 126–166. *[175]*

35. Goldie, C.M. and Klüppelberg, C. (1996) Subexponential distributions. In: Adler, R., Feldman, R. and Taqqu, M.S. (Eds.) *A Practical Guide to Heavy Tails: Statistical Techniques for Analysing Heavy–Tailed Distributions,* pp. 435–460. Birkhäuser, Boston. *[111]*
36. Grandell, J. (1991) *Aspects of Risk Theory.* Springer, Berlin. *[180]*
37. Grandell, J. (1997) *Mixed Poisson Processes.* Chapman and Hall, London. *[74]*
38. Grübel, R. and Hermesmeier, R. (1999) Computation of compound distributions I: aliasing erros and exponential tilting. *ASTIN Bulletin* **29**, 197–214. *[130]*
39. Grübel, R. and Hermesmeier, R. (2000) Computation of compound distributions II: discretization errors and Richardson extraploation. *ASTIN Bulletin* **30**, 309–331. *[130]*
40. Gut, A. (1988) *Stopped Random Walks.* Springer, Berlin. *[65,71]*
41. Hall, P.G. (1992) *The Bootstrap and Edgeworth Expansion.* Springer, New York. *[132,143]*
42. Heidelberger, P. (1995) Fast simulation of rare events in queueing and reliability models. *ACM TOMACS* **6**, 43–85. *[143]*
43. Hess, K.T., Liewald, A. and Schmidt, K.D. (2002) An extension of Panjer's recursion. *ASTIN Bulletin* **32**, 283–298. *[130]*
44. Hogg, R.V. and Klugman, S.A. (1984) *Loss Distributions.* Wiley, New York. *[99]*
45. Jensen, J. (1995) *Saddlepoint Approximations.* Oxford University Press, Oxford. *[132]*
46. Kaas, R., Goovaerts, M., Dhaene, J. and Denuit, M. (2001) *Modern Actuarial Risk Theory.* Kluwer, Boston. *[86,88,130,199,214]*
47. Kallenberg, O. (1973) Characterization and convergence of random measures and point processes. *Z. Wahrscheinlichkeitstheorie verw. Geb.* **27**, 9–21. *[74]*
48. Kallenberg, O. (1983) *Random Measures.* 3rd edition. Akademie-Verlag, Berlin. *[52]*
49. Kesten, H. (1973) Random difference equations and renewal theory for products of random matrices. *Acta Math.* **131**, 207–248. *[175]*
50. Kingman, J.F.C. (1996) *Poisson Processes.* Oxford University Press, Oxford (UK). *[52]*
51. Klugman, S.A., Panjer, H.H. and Willmot, G.E. (1998) *Loss Models. From Data to Decisions.* Wiley, New York. *[86,199,214]*
52. Koller, M. (2000) *Stochastische Modelle in der Lebensversicherung.* Springer, Berlin. *[19]*
53. Lehmann, E.L. (1986) *Testing Statistical Hypotheses.* Springer, New York. *[199]*
54. Lukacs, E. (1970) *Characteristic Functions.* 2nd edition. Hafner Publ. Co., New York. *[53,145]*
55. Lundberg, F. (1903) *Approximerad framställning av sannolikhetsfunktionen. Återförsäkring av kollektivrisker.* Akad. Afhandling. Almqvist och Wiksell, Uppsala. *[7,9]*

56. Mammen, E. (1992) *When Does Bootstrap Work?* Asymptotic Results and Simulations. *Lecture Notes in Statistics* **77**, Springer, New York. *[143]*
57. Mikosch, T. (1998) *Elementary Stochastic Calculus with Finance in View.* World Scientific, Singapore. *[18,148]*
58. Mikosch, T. (2003) Modeling dependence and tails of financial time series. In: Finkenstädt, B. and Rootzén, H. (Eds.) *Extreme Values in Finance, Telecommunications and the Environment.* CRC Press, pp. 185–286. *[48,175]*
59. Müller, H.-G. and Stadtmüller, U. (1987) Estimation of heteroscedasticity in regression analysis. *Ann. Statist.* **15**, 610–625. *[39]*
60. Panjer, H.H. (1981) Recursive evaluation of a family of compound distributions. *ASTIN Bulletin* **11**, 22–26. *[126]*
61. Petrov, V.V. (1975) *Sums of Independent Random Variables.* Springer, Berlin. *[132]*
62. Pitman, E.J.G. (1980) Subexponential distribution functions. *J. Austral. Math. Soc. Ser. A* **29**, 337–347. *[114]*
63. Priestley, M.B. (1981) *Spectral Analysis and Time Series.* Vols. **I** and **II**. Academic Press, New York. *[39]*
64. Resnick, S.I. (1987) *Extreme Values, Regular Variation, and Point Processes.* Springer, New York. *[48,52,58,90,109]*
65. Resnick, S.I. (1992) *Adventures in Stochastic Processes.* Birkhäuser, Boston. *[19,23,52,63,67–71,161,177]*
66. Rogers, L.C.G. and Williams, D. (2000) *Diffusions, Markov Processes and Martingales.* Vol. **1**. Cambridge University Press, Cambridge (UK). *[14,18,19]*
67. Rolski, T., Schmidli, H., Schmidt, V. and Teugels, J. (1999) *Stochastic Processes for Insurance and Finance.* Wiley, New York. *[71,130,166,180,181]*
68. Rootzén, H. and Tajvidi, N. (1997) Extreme value statistics and wind storm losses: a case study. *Scand. Actuar. J.* 70–94. *[97]*
69. Rytgaard, M. (1996) Simulation experiments on the mean residual life function $m(x)$. In: *Proceedings of the XXVII ASTIN Colloquium, Copenhagen, Denmark.* Vol. **1**, pp. 59–81. *[97]*
70. Samorodnitsky, G. and Taqqu, M.S. (1994) *Stable Non-Gaussian Random Processes. Stochastic Models with Infinite Variance.* Chapman and Hall, London. *[57]*
71. Sato, K.-i. (1999) *Lévy Processes and Infinitely Divisible Distributions.* Cambridge University Press, Cambridge (UK). *[15,18,145]*
72. Schroeder, M. (1990) *Fractals, Chaos, Power Laws.* Freeman, New York. *[106]*
73. Sigma (2003) Tables on the major losses 1970-2002. *Sigma publication No 2*, Swiss Re, Zürich, p. 34. The publication is available under www.swissre.com. *[102]*
74. Spitzer, F. (1976) *Principles of Random Walk.* 2nd edition. Springer, Berlin. *[159]*
75. Straub, E. (1988) *Non-Life Insurance Mathematics.* Springer, New York. *[199,213,214]*
76. Sundt, B. (1999) *An Introduction to Non-Life Insurance Mathematics.* 4th edition. VVW Karlsruhe. *[199,214]*

77. Sundt, B. (1999) On multivariate Panjer recursions. *ASTIN Bulletin* **29**, 29–46. *[130]*
78. Williams, D. (1991) *Probability with Martingales.* Cambridge University Press, Cambridge (UK). *[62,65,65,135,197]*
79. Willinger, W., Taqqu, M.S., Leland, M. and Wilson. D. (1995) Self-similarity through high variability: statistical analysis of ethernet lan traffic at the source level. In: *Proceedings of the ACM/SIGCOMM'95, Cambridge, MA. Computer Communications Review* **25**, 100–113. *[66]*
80. Willmot, G.E. and Lin, X.S. (2001) *Lundberg Approximations for Compound Distributions with Insurance Applications.* Springer, Berlin. *[130]*

Index

D

E

F

G

H

M

N

O

P

Q

R

S

T

U

V

W

List of Abbreviations and Symbols

We have tried as much as possible to use uniquely defined abbreviations and symbols. In various cases, however, symbols can have different meanings in different sections. The list below gives the most typical usage. Commonly-used mathematical symbols are not explained here.

Abbreviation or Symbol	**Explanation**	**p.**
a.s.	almost sure, almost surely, with probability 1	
a.e.	almost everywhere, almost every	
$\mathrm{Bin}(n,p)$	binomial distribution with parameters (n,p): $p(k) = \binom{n}{k} p^k (1-p)^{n-k}$, $k = 0,\dots,n$	
$\mathbb{C}$	set of the complex numbers	
$\mathrm{corr}(X,Y)$	correlation between the random variables X and Y	
$\mathrm{cov}(X,Y)$	covariance between the random variables X and Y	
$E_F X$	expectation of X with respect to the distribution F	
$e_F(u)$	mean excess function	94
$\mathrm{Exp}(\lambda)$	exponential distribution with parameter λ: $F(x) = 1 - \mathrm{e}^{-\lambda x}$, $x > 0$	
F	distribution function/distribution of a random variable	
F_A	distribution function/distribution of the random variable A	
F_I	integrated tail distribution: $F_I(x) = (E_F X)^{-1} \int_0^x \overline{F}(y)\,dy$, $x \geq 0$	167
F_n	empirical (sample) distribution function	89
$F^{\leftarrow}(p)$	p-quantile/quantile function of F	89
$F_n^{\leftarrow}(p)$	empirical p-quantile	90
$\overline{F}$	tail of the distribution function F: $\overline{F} = 1 - F$	
F^{n*}	n-fold convolution of the distribution function/distribution F	
$\widehat{f}_X$	Laplace-Stieltjes transform of the random variable X:	

	$\widehat{f}_X(s) = E\mathrm{e}^{-sX}$, $s > 0$	177
Γ	gamma function : $\Gamma(x) = \int_0^\infty t^{x-1}\,\mathrm{e}^{-t}\,dt$	
$\Gamma(\gamma,\beta)$	gamma distribution with parameters γ and β: gamma density $f(x) = \beta^\gamma(\Gamma(\gamma))^{-1}x^{\gamma-1}\,\mathrm{e}^{-\beta x}$, $x > 0$	
IBNR	incurred but not reported claim	48
I_A	indicator function of the set (event) A	
iid	independent, identically distributed	
λ	intensity or intensity function of a Poisson process	15
Λ	Gumbel distribution: $\Lambda(x) = \exp\{-\mathrm{e}^{-x}\}\,, x \in \mathbb{R}$	154
Leb	Lebesgue measure	
$\log x$	logarithm with basis e	
$\log^+ x$	$\log^+ x = \max(\log x, 0)$	
$L(x)$	slowly varying function	105
M_n	maximum of $X_1, \ldots, X_n$	
$\mu(t)$	mean value function of a Poisson process on $[0,\infty)$	14
$\mathbb{N}$	set of the positive integers	
$\mathbb{N}_0$	set of the non-negative integers	
$N, N(t)$	claim number or claim number process	7
$\widetilde{N}$	often a homogeneous Poisson process	
$\mathrm{N}(\mu,\sigma^2)$	Gaussian (normal) distribution with mean μ, variance σ^2	
$\mathrm{N}(0,1)$	standard normal distribution	
$\mathrm{N}(\mu,\boldsymbol{\Sigma})$	multivariate Gaussian (normal) distribution with mean vector μ and covariance matrix $\boldsymbol{\Sigma}$	
NPC	net profit condition	159
$o(1)$	$h(x) = o(1)$ as $x \to x_0 \in [-\infty,\infty]$ means that $\lim_{x\to x_0} h(x) = 0$	20
ω	$\omega \in \Omega$ random outcome	
$(\Omega, \mathcal{F}, P)$	probability space	
$\phi_X(t)$	characteristic function of the random variable X: $\phi_X(t) = E\mathrm{e}^{itX}\,, t \in \mathbb{R}$	
Φ	standard normal distribution/distribution function	
Φ_α	Frechet distribution: $\Phi_\alpha(x) = \exp\{-x^{-\alpha}\}\,, x > 0$	154
$\mathrm{Pois}(\lambda)$	Poisson distribution with parameter λ: $p(n) = \mathrm{e}^{-\lambda}\lambda^n/n!\,,\ n \in \mathbb{N}_0$	
PRM	Poisson random measure	
$\mathrm{PRM}(\mu)$	Poisson random measure with mean measure μ	46
$\psi(u)$	ruin probability	157
Ψ_α	Weibull (extreme value) distribution: $\Psi_\alpha(x) = \exp\{-(-x)^\alpha\}\,, x < 0$	154
$\mathbb{R}, \mathbb{R}^1$	real line	
$\mathbb{R}_+$	$\mathbb{R}_+ = (0,\infty)$	
$\mathbb{R}^d$	d-dimensional Euclidean space	
ρ	safety loading	85
$\rho(\widehat{\mu})$	(quadratic) Bayes or linear Bayes risk of $\widehat{\mu}$	194

$\mathcal{S}$	class of the subexponential distributions	109
$\mathrm{sign}(a)$	sign of the real number a	
S_n	cumulative sum of $X_1, \ldots, X_n$	
$S, S(t)$	total, aggregate claim amount process	8
t	time, index of a stochastic process	
t_ν	student t-distribution with ν degrees of freedom t_ν-density for $x \in \mathbb{R}$, $\nu > 0$, $f(x) = \Gamma((\nu+1)/2)\,(\sqrt{\pi\,\nu}\,\Gamma(\nu/2))^{-1}(1+x^2/\nu)^{-(\nu+1)/2}$	
T_i	arrival times of a claim number process	7
u	initial capital	156
$\mathrm{U}(a,b)$	uniform distribution on (a,b)	
$U(t)$	risk process	156
$\mathrm{var}(X)$	variance of the random variable X	
$\mathrm{var}_F(X)$	variance of a random variable X with distribution F	
X_n	claim size	7
$X_{(n-i+1)}$	ith largest order statistic in the sample $X_1, \ldots, X_n$	28
$\overline{X}_n$	sample mean	
$\mathbb{Z}$	set of the integers	
$\sim$	$X \sim F$: X has distribution F	
$\approx$	$a(x) \approx b(x)$ as $x \to x_0$ means that $a(x)$ is approximately (roughly) of the same order as $b(x)$ as $x \to x_0$. It is only used in a heuristic sense.	
$*$	convolution or bootstrapped quantity	
$\Vert \cdot \Vert$	$\Vert x \Vert$ norm of x	
$[\cdot]$	$[x]$ integer part of x	
$\{\cdot\}$	$\{x\}$ fractional part of x	
x_+	positive part of a number: $x_+ = \max(0,x)$	
B^c	complement of the set B	
$\stackrel{\mathrm{a.s.}}{\to}$	$A_n \stackrel{\mathrm{a.s.}}{\to} A$: a.s. convergence	
$\stackrel{d}{\to}$	$A_n \stackrel{d}{\to} A$: convergence in distribution	
$\stackrel{P}{\to}$	$A_n \stackrel{P}{\to} A$: convergence in probability	
$\stackrel{d}{=}$	$A \stackrel{d}{=} B$: A and B have the same distribution	

For a function f on $\mathbb{R}$ and intervals $(a,b]$, $a < b$, we write $f(a,b] = f(b) - f(a)$.

Universitext

Aguilar, M.; Gitler, S.; Prieto, C.: Algebraic Topology from a Homotopical Viewpoint

Aksoy, A.; Khamsi, M. A.: Methods in Fixed Point Theory

Alevras, D.; Padberg M. W.: Linear Optimization and Extensions

Andersson, M.: Topics in Complex Analysis

Aoki, M.: State Space Modeling of Time Series

Arnold, V. I.: Lectures on Partial Differential Equations

Audin, M.: Geometry

Aupetit, B.: A Primer on Spectral Theory

Bachem, A.; Kern, W.: Linear Programming Duality

Bachmann, G.; Narici, L.; Beckenstein, E.: Fourier and Wavelet Analysis

Badescu, L.: Algebraic Surfaces

Balakrishnan, R.; Ranganathan, K.: A Textbook of Graph Theory

Balser, W.: Formal Power Series and Linear Systems of Meromorphic Ordinary Differential Equations

Bapat, R.B.: Linear Algebra and Linear Models

Benedetti, R.; Petronio, C.: Lectures on Hyperbolic Geometry

Benth, F. E.: Option Theory with Stochastic Analysis

Berberian, S. K.: Fundamentals of Real Analysis

Berger, M.: Geometry I, and II

Bliedtner, J.; Hansen, W.: Potential Theory

Blowey, J. F.; Coleman, J. P.; Craig, A. W. (Eds.): Theory and Numerics of Differential Equations

Blowey, J.; Craig, A.: Frontiers in Numerical Analysis. Durham 2004

Blyth, T. S.: Lattices and Ordered Algebraic Structures

Börger, E.; Grädel, E.; Gurevich, Y.: The Classical Decision Problem

Böttcher, A; Silbermann, B.: Introduction to Large Truncated Toeplitz Matrices

Boltyanski, V.; Martini, H.; Soltan, P. S.: Excursions into Combinatorial Geometry

Boltyanskii, V. G.; Efremovich, V. A.: Intuitive Combinatorial Topology

Bonnans, J. F.; Gilbert, J. C.; Lemaréchal, C.; Sagastizábal, C. A.: Numerical Optimization

Booss, B.; Bleecker, D. D.: Topology and Analysis

Borkar, V. S.: Probability Theory

Brunt B. van: The Calculus of Variations

Bühlmann, H.; Gisler, A.: A Course in Credibility Theory and Its Applications

Carleson, L.; Gamelin, T. W.: Complex Dynamics

Cecil, T. E.: Lie Sphere Geometry: With Applications of Submanifolds

Chae, S. B.: Lebesgue Integration

Chandrasekharan, K.: Classical Fourier Transform

Charlap, L. S.: Bieberbach Groups and Flat Manifolds

Chern, S.: Complex Manifolds without Potential Theory

Chorin, A. J.; Marsden, J. E.: Mathematical Introduction to Fluid Mechanics

Cohn, H.: A Classical Invitation to Algebraic Numbers and Class Fields

Curtis, M. L.: Abstract Linear Algebra

Curtis, M. L.: Matrix Groups

Cyganowski, S.; Kloeden, P.; Ombach, J.: From Elementary Probability to Stochastic Differential Equations with MAPLE

Dalen, D. van: Logic and Structure

Das, A.: The Special Theory of Relativity: A Mathematical Exposition

Debarre, O.: Higher-Dimensional Algebraic Geometry

Deitmar, A.: A First Course in Harmonic Analysis

Demazure, M.: Bifurcations and Catastrophes

Devlin, K. J.: Fundamentals of Contemporary Set Theory

DiBenedetto, E.: Degenerate Parabolic Equations

Diener, F.; Diener, M. (Eds.): Nonstandard Analysis in Practice

Dimca, A.: Sheaves in Topology

Dimca, A.: Singularities and Topology of Hypersurfaces

DoCarmo, M. P.: Differential Forms and Applications

Duistermaat, J. J.; Kolk, J. A. C.: Lie Groups

Edwards, R. E.: A Formal Background to Higher Mathematics Ia, and Ib

Edwards, R. E.: A Formal Background to Higher Mathematics IIa, and IIb

Emery, M.: Stochastic Calculus in Manifolds

Emmanouil, I.: Idempotent Matrices over Complex Group Algebras

Endler, O.: Valuation Theory

Erez, B.: Galois Modules in Arithmetic

Everest, G.; Ward, T.: Heights of Polynomials and Entropy in Algebraic Dynamics

Farenick, D. R.: Algebras of Linear Transformations

Foulds, L. R.: Graph Theory Applications

Franke, J.; Härdle, W.; Hafner, C. M.: Statistics of Financial Markets: An Introduction

Frauenthal, J. C.: Mathematical Modeling in Epidemiology

Freitag, E.; Busam, R.: Complex Analysis

Friedman, R.: Algebraic Surfaces and Holomorphic Vector Bundles

Fuks, D. B.; Rokhlin, V. A.: Beginner's Course in Topology

Fuhrmann, P. A.: A Polynomial Approach to Linear Algebra

Gallot, S.; Hulin, D.; Lafontaine, J.: Riemannian Geometry

Gardiner, C. F.: A First Course in Group Theory

Gårding, L.; Tambour, T.: Algebra for Computer Science

Godbillon, C.: Dynamical Systems on Surfaces

Godement, R.: Analysis I, and II

Goldblatt, R.: Orthogonality and Spacetime Geometry

Gouvêa, F. Q.: p-Adic Numbers

Gross, M. et al.: Calabi-Yau Manifolds and Related Geometries

Gustafson, K. E.; Rao, D. K. M.: Numerical Range. The Field of Values of Linear Operators and Matrices

Gustafson, S. J.; Sigal, I. M.: Mathematical Concepts of Quantum Mechanics

Hahn, A. J.: Quadratic Algebras, Clifford Algebras, and Arithmetic Witt Groups

Hájek, P.; Havránek, T.: Mechanizing Hypothesis Formation

Heinonen, J.: Lectures on Analysis on Metric Spaces

Hlawka, E.; Schoißengeier, J.; Taschner, R.: Geometric and Analytic Number Theory

Holmgren, R. A.: A First Course in Discrete Dynamical Systems

Howe, R., Tan, E. Ch.: Non-Abelian Harmonic Analysis

Howes, N. R.: Modern Analysis and Topology

Hsieh, P.-F.; Sibuya, Y. (Eds.): Basic Theory of Ordinary Differential Equations

Humi, M., Miller, W.: Second Course in Ordinary Differential Equations for Scientists and Engineers

Hurwitz, A.; Kritikos, N.: Lectures on Number Theory

Huybrechts, D.: Complex Geometry: An Introduction

Isaev, A.: Introduction to Mathematical Methods in Bioinformatics

Istas, J.: Mathematical Modeling for the Life Sciences

Iversen, B.: Cohomology of Sheaves

Jacod, J.; Protter, P.: Probability Essentials

Jennings, G. A.: Modern Geometry with Applications

Jones, A.; Morris, S. A.; Pearson, K. R.: Abstract Algebra and Famous Inpossibilities

Jost, J.: Compact Riemann Surfaces

Jost, J.: Dynamical Systems. Examples of Complex Behaviour

Jost, J.: Postmodern Analysis

Jost, J.: Riemannian Geometry and Geometric Analysis

Kac, V.; Cheung, P.: Quantum Calculus

Kannan, R.; Krueger, C. K.: Advanced Analysis on the Real Line

Kelly, P.; Matthews, G.: The Non-Euclidean Hyperbolic Plane

Kempf, G.: Complex Abelian Varieties and Theta Functions

Kitchens, B. P.: Symbolic Dynamics

Kloeden, P.; Ombach, J.; Cyganowski, S.: From Elementary Probability to Stochastic Differential Equations with MAPLE

Kloeden, P. E.; Platen; E.; Schurz, H.: Numerical Solution of SDE Through Computer Experiments

Kostrikin, A. I.: Introduction to Algebra

Krasnoselskii, M. A.; Pokrovskii, A. V.: Systems with Hysteresis

Kurzweil, H.; Stellmacher, B.: The Theory of Finite Groups. An Introduction

Kyprianou, A.: Introductory Lectures on Fluctuations of Lévy Processes with Applications

Lang, S.: Introduction to Differentiable Manifolds

Luecking, D. H., Rubel, L. A.: Complex Analysis. A Functional Analysis Approach

Ma, Zhi-Ming; Roeckner, M.: Introduction to the Theory of (non-symmetric) Dirichlet Forms

Mac Lane, S.; Moerdijk, I.: Sheaves in Geometry and Logic

Marcus, D. A.: Number Fields

Martinez, A.: An Introduction to Semiclassical and Microlocal Analysis

Matoušek, J.: Using the Borsuk-Ulam Theorem

Matsuki, K.: Introduction to the Mori Program

Mazzola, G.; Milmeister G.; Weissman J.: Comprehensive Mathematics for Computer Scientists 1

Mazzola, G.; Milmeister G.; Weissman J.: Comprehensive Mathematics for Computer Scientists 2

Mc Carthy, P. J.: Introduction to Arithmetical Functions

McCrimmon, K.: A Taste of Jordan Algebras

Meyer, R. M.: Essential Mathematics for Applied Field

Meyer-Nieberg, P.: Banach Lattices

Mikosch, T.: Non-Life Insurance Mathematics

Mines, R.; Richman, F.; Ruitenburg, W.: A Course in Constructive Algebra

Moise, E. E.: Introductory Problem Courses in Analysis and Topology

Montesinos-Amilibia, J. M.: Classical Tessellations and Three Manifolds

Morris, P.: Introduction to Game Theory

Nikulin, V. V.; Shafarevich, I. R.: Geometries and Groups

Oden, J. J.; Reddy, J. N.: Variational Methods in Theoretical Mechanics

Øksendal, B.: Stochastic Differential Equations

Øksendal, B.; Sulem, A.: Applied Stochastic Control of Jump Diffusions

Poizat, B.: A Course in Model Theory

Polster, B.: A Geometrical Picture Book

Porter, J. R.; Woods, R. G.: Extensions and Absolutes of Hausdorff Spaces

Radjavi, H.; Rosenthal, P.: Simultaneous Triangularization

Ramsay, A.; Richtmeyer, R. D.: Introduction to Hyperbolic Geometry

Rees, E. G.: Notes on Geometry

Reisel, R. B.: Elementary Theory of Metric Spaces

Rey, W. J. J.: Introduction to Robust and Quasi-Robust Statistical Methods

Ribenboim, P.: Classical Theory of Algebraic Numbers

Rickart, C. E.: Natural Function Algebras

Roger G.: Analysis II

Rotman, J. J.: Galois Theory

Rubel, L. A.: Entire and Meromorphic Functions

Ruiz-Tolosa, J. R.; Castillo E.: From Vectors to Tensors

Runde, V.: A Taste of Topology

Rybakowski, K. P.: The Homotopy Index and Partial Differential Equations

Sagan, H.: Space-Filling Curves

Samelson, H.: Notes on Lie Algebras

Schiff, J. L.: Normal Families

Sengupta, J. K.: Optimal Decisions under Uncertainty

Séroul, R.: Programming for Mathematicians

Seydel, R.: Tools for Computational Finance

Shafarevich, I. R.: Discourses on Algebra

Shapiro, J. H.: Composition Operators and Classical Function Theory

Simonnet, M.: Measures and Probabilities

Smith, K. E.; Kahanpää, L.; Kekäläinen, P.; Traves, W.: An Invitation to Algebraic Geometry

Smith, K. T.: Power Series from a Computational Point of View

Smoryński, C.: Logical Number Theory I. An Introduction

Stichtenoth, H.: Algebraic Function Fields and Codes

Stillwell, J.: Geometry of Surfaces

Stroock, D. W.: An Introduction to the Theory of Large Deviations

Sunder, V. S.: An Invitation to von Neumann Algebras

Tamme, G.: Introduction to Étale Cohomology

Tondeur, P.: Foliations on Riemannian Manifolds

Toth, G.: Finite Möbius Groups, Minimal Immersions of Spheres, and Moduli

Verhulst, F.: Nonlinear Differential Equations and Dynamical Systems

Wong, M. W.: Weyl Transforms

Xambó-Descamps, S.: Block Error-Correcting Codes

Zaanen, A.C.: Continuity, Integration and Fourier Theory

Zhang, F.: Matrix Theory

Zong, C.: Sphere Packings

Zong, C.: Strange Phenomena in Convex and Discrete Geometry

Zorich, V. A.: Mathematical Analysis I

Zorich, V. A.: Mathematical Analysis II