

TOPOLOGICAL AND GEOMETRIC STRUCTURES IN LOW DIMENSIONS

MSRI/SLMath, January 20 to May 22, 2026

BOOKS

- [1] R. BENEDETTI and C. PETRONIO, *Lectures on hyperbolic geometry*, Universitext, Springer, Cham, Switzerland, 1992, ISBN 3-540-55534-X. [MR](#) [Zbl](#)
- [2] D. CALEGARI, *Foliations and the geometry of 3-manifolds*, Oxford Mathematical Monographs, Oxford University Press, Oxford, England, 2007, ISBN 978-0-19-857008-0. [MR](#) [Zbl](#)
- [3] A. CANDEL and L. CONLON, *Foliations I*, Graduate Studies in Mathematics **23**, American Mathematical Society, Providence, RI, 2000, ISBN 0-8218-0809-5. [MR](#) [Zbl](#)
- [4] A. CANDEL and L. CONLON, *Foliations II*, Graduate Studies in Mathematics **60**, American Mathematical Society, Providence, RI, 2003, ISBN 0-8218-0881-8. [MR](#) [Zbl](#)
- [5] J. W. CANNON, W. J. FLOYD, R. KENYON, and W. R. PARRY, *Hyperbolic geometry*, in *Flavors of geometry*, S. LEVY, ed., Mathematical Sciences Research Institute Publications **31**, Cambridge University Press, Cambridge, England, 1997, ISBN 0-521-62048-1; 0-521-62962-4, pp. 59–115. [MR](#) [Zbl](#)
- [6] A. J. CASSON and S. A. BLEILER, *Automorphisms of surfaces after Nielsen and Thurston*, London Mathematical Society Student Texts **9**, Cambridge University Press, Cambridge, England, 1988, ISBN 0-521-34203-1. [MR](#) [Zbl](#)
- [7] Y. M. ELIASHBERG and W. P. THURSTON, *Confoliations*, University Lecture Series **13**, American Mathematical Society, Providence, RI, 1998, ISBN 0-8218-0776-5. [MR](#) [Zbl](#)
- [8] B. FARB and D. MARGALIT, *A primer on mapping class groups*, Princeton Mathematical Series **49**, Princeton University Press, Princeton, NJ, 2012, ISBN 978-0-691-14794-9. [MR](#) [Zbl](#)
- [9] A. FATHI, F. LAUDENBACH, and V. POÉNARU, *Thurston's work on surfaces*, Mathematical Notes **48**, Princeton University Press, Princeton, NJ, 2012, ISBN 978-0-691-14735-2. [MR](#) [Zbl](#)
- [10] T. FISHER and B. HASSELBLATT, *Hyperbolic flows*, Zurich Lectures in Advanced Mathematics, EMS Publishing House, Berlin, Germany, 2019, ISBN 978-3-03719-200-9. [MR](#) [Zbl](#)
- [11] A. FLETCHER and V. MARKOVIC, *Quasiconformal maps and Teichmüller theory*, Oxford Graduate Texts in Mathematics **11**, Oxford University Press, Oxford, England, 2007, ISBN 978-0-19-856926-8; 0-19-856926-2. [MR](#) [Zbl](#)
- [12] G. K. FRANCIS, *A topological picturebook*, Springer, Cham, Switzerland, 2007, ISBN 978-0-387-34542-0, 978-0-387-68120-7, 0-387-96426-6. [MR](#) [Zbl](#)
- [13] F. P. GARDINER, *Teichmüller theory and quadratic differentials*, Pure and Applied Mathematics, Wiley, New York, NY, 1987, ISBN 0-471-84539-6. [MR](#) [Zbl](#)
- [14] F. P. GARDINER and N. LAKIC, *Quasiconformal Teichmüller theory*, Mathematical Surveys and Monographs **76**, American Mathematical Society, Providence, RI, 2000, ISBN 0-8218-1983-6. [MR](#) [Zbl](#)
- [15] J. HEMPEL, *3-Manifolds*, Annals of Mathematics Studies **86**, Princeton University Press, Princeton, NJ, 1976. [MR](#) [Zbl](#)
- [16] J. H. HUBBARD, *Teichmüller theory and applications to geometry, topology, and dynamics, 1: Teichmüller theory*, Matrix Editions, Ithaca, NY, 2006, ISBN 978-0-9715766-2-9; 0-9715766-2-9. [MR](#) [Zbl](#)

- [17] J. H. HUBBARD, *Teichmüller theory and applications to geometry, topology, and dynamics, 2: Surface homeomorphisms and rational functions*, Matrix Editions, Ithaca, NY, 2016, ISBN 978-1-943863-00-6. [MR](#) [Zbl](#)
- [18] Y. IMAYOSHI and M. TANIGUCHI, *An introduction to Teichmüller spaces*, Springer, Tokyo, Japan, 1992, ISBN 4-431-70088-9. [MR](#) [Zbl](#)
- [19] W. JACO, *Lectures on three-manifold topology*, CBMS Regional Conference Series in Mathematics **43**, American Mathematical Society, Providence, RI, 1980, ISBN 0-8218-1693-4. [MR](#) [Zbl](#)
- [20] A. KATOK and B. HASSELBLATT, *Introduction to the modern theory of dynamical systems*, Encyclopedia of Mathematics and its Applications **54**, Cambridge University Press, Cambridge, England, 1995, ISBN 0-521-34187-6. [MR](#) [Zbl](#)
- [21] S. KATOK, *Fuchsian groups*, Chicago Lectures in Mathematics, University of Chicago Press, Chicago, IL, 1992, ISBN 0-226-42582-7; 0-226-42583-5. [MR](#) [Zbl](#)
- [22] M. LACKENBY, *Three-dimensional manifolds*, Lecture notes for a graduate course, Oxford, England, 1999.
- [23] B. MARTELLI, *An introduction to geometric topology*, 4th ed., published by author, Pisa, Italy, 2025, ISBN 9798858790709.
- [24] C. T. McMULLEN, *Complex dynamics and renormalization*, Annals of Mathematics Studies **135**, Princeton University Press, Princeton, NJ, 1994, ISBN 0-691-02982-2; 0-691-02981-4. [MR](#) [Zbl](#)
- [25] J. MORGAN and G. TIAN, *Ricci flow and the Poincaré conjecture*, Clay Mathematics Monographs **3**, American Mathematical Society, Providence, RI, 2007, ISBN 978-0-8218-4328-4. [MR](#) [Zbl](#)
- [26] D. MUMFORD, C. SERIES, and D. WRIGHT, *Indra's pearls: The vision of Felix Klein*, Cambridge University Press, Cambridge, England, 2002, ISBN 0-521-35253-3. [MR](#) [Zbl](#)
- [27] A. NAVAS, *Groups of circle diffeomorphisms*, Chicago Lectures in Mathematics, University of Chicago Press, Chicago, IL, 2011, ISBN 978-0-226-56951-2; 0-226-56951-9. [MR](#) [Zbl](#)
- [28] A. PAPADOPOULOS (ed.), *Handbook of Teichmüller theory, Vols. I–VII*, IRMA Lectures in Mathematics and Theoretical Physics, European Mathematical Society, Berlin, Germany, 2020. [MR](#) [Zbl](#)
- [29] J. S. PURCELL, *Hyperbolic knot theory*, Graduate Studies in Mathematics **209**, American Mathematical Society, Providence, RI, 2020, ISBN 978-1-4704-5499-9. [MR](#) [Zbl](#)
- [30] D. ROLFSEN, *Knots and links*, Mathematics Lecture Series **7**, Publish or Perish, Houston, TX, 1990, Corrected reprint of the 1976 original, ISBN 0-914098-16-0. [MR](#) [Zbl](#)
- [31] J. SCHULTENS, *Introduction to 3-manifolds*, Graduate Studies in Mathematics **151**, American Mathematical Society, Providence, RI, 2014, ISBN 978-1-4704-1020-9. [MR](#) [Zbl](#)
- [32] W. P. THURSTON, *Three-dimensional geometry and topology*, Princeton Mathematical Series **35**, Princeton University Press, Princeton, NJ, 1997, Edited by Silvio Levy. ISBN 0-691-08304-5. [MR](#) [Zbl](#)
- [33] W. P. THURSTON, *Collected works of William P. Thurston with commentary, Vol. I: Foliations, surfaces and differential geometry*, American Mathematical Society, Providence, RI, 2022, Edited by Benson Farb, David Gabai, and Steven P. Kerckhoff. ISBN 978-1-4704-6388-5. [MR](#) [Zbl](#)
- [34] W. P. THURSTON, *Collected works of William P. Thurston with commentary, Vol. II: 3-manifolds, complexity and geometric group theory*, American Mathematical Society, Providence, RI, 2022, Edited by Benson Farb, David Gabai, and Steven P. Kerckhoff. ISBN 978-1-4704-6389-2. [MR](#) [Zbl](#)
- [35] W. P. THURSTON, *Collected works of William P. Thurston with commentary, Vol. III: Dynamics, computer science and general interest*, American Mathematical Society, Providence, RI, 2022, Edited by Benson Farb, David Gabai, and Steven P. Kerckhoff. ISBN 978-1-4704-6390-8. [MR](#) [Zbl](#)

- [36] W. P. THURSTON, *Collected works of William P. Thurston with commentary, Vol. IV: The geometry and topology of three-manifolds*, American Mathematical Society, Providence, RI, 2022, ISBN 978-1-4704-6391-5. [MR](#) [Zbl](#)

JOURNALS

- [37] *Commentarii Mathematici Helvetici*, Swiss Mathematical Society/EMS, Berlin, Germany. ISSN 0010-2571, e-ISSN 1420-8946 [MR](#) [ZBL](#).
- [38] *Ergodic Theory and Dynamical Systems*, Cambridge University Press, Cambridge, England. ISSN 0143-3857, e-ISSN 1469-4417 [MR](#) [ZBL](#).
- [39] *Geometric and Functional Analysis*, Birkhäuser, Basel, Switzerland. ISSN 1016-443X, e-ISSN 1420-8970 [MR](#) [ZBL](#).
- [40] *Geometry & Topology*, Mathematical Sciences Publishers, Berkeley, CA. ISSN 1465-3060, e-ISSN 1364-0380 [MR](#) [ZBL](#).
- [41] *Groups, Geometry, and Dynamics*, European Mathematical Society, Berlin, Germany. ISSN 1661-7207, e-ISSN 1661-7215 [MR](#) [ZBL](#).
- [42] *Journal für die Reine und Angewandte Mathematik*, (*Crelle's Journal*), Degruyter Brill, Berlin, Germany. ISSN 0075-4102, e-ISSN 1435-5345 [MR](#) [ZBL](#).
- [43] *Journal of Differential Geometry*, Lehigh University/International Press, Somerville, MA. ISSN 0022-040X, e-ISSN 1945-743X [MR](#) [ZBL](#).
- [44] *Journal of Modern Dynamics*, American Institute of Mathematical Sciences, Springfield, MO. ISSN 1930-5311, e-ISSN 1930-532X [MR](#) [ZBL](#).
- [45] *Journal of Topology*, London Mathematical Society/Wiley, Hoboken, NJ. ISSN 1753-8416, e-ISSN 1753-8424 [MR](#) [ZBL](#).