

**Math 1C03 Mathematical Reasoning Reading List**  
**Term 2 Winter 2007–2008**

Barrow-Green, June *Poincare and the three body problem*. American Mathematical Society, 1997. ISBN: 978-0-8218-0367.

Beckman, Bengt *Codebreakers: Arne Beurling and the Swedish crypto program during World War II*. American Mathematical Society, 2003. ISBN: 978-0-8218-2889.

Berggren, J.L and Thomas, R. *Euclid's Phaenomena*. American Mathematical Society, 2006. ISBN 978-0-8218-4072.

Davis, Philip J.; Hersh, Reuben *The mathematical experience*. With an introduction by Gian-Carlo Rota. Birkhuser, Boston, Mass., 1980. xv+440 pp. ISBN: 3-7643-3018-X

Derbyshire, John *Prime obsession. Bernhard Riemann and the greatest unsolved problem in mathematics*. Joseph Henry Press, Washington, DC, 2003. xvi+422 pp. ISBN: 0-309-08549-7

Gleick, James *Chaos. Making a new science*. Penguin Books, New York, 1987. xiv+352 pp. ISBN: 0-14-009250-1

Gray, Jeremy J. *The Hilbert challenge*. Oxford University Press, Oxford, 2000. xii+315 pp. ISBN: 0-19-850651-1

Hawking, Stephen *A brief history of time*. Bantam Books, New York, 1988, ISBN: 0-553-10953-7

Hawking, Stephen; Penrose, Roger *The nature of space and time*. With a foreword by Michael Atiyah. The Isaac Newton Institute Series of Lectures. Princeton University Press, Princeton, NJ, 1996. x+141 pp. ISBN: 0-691-03791-4

Hofstadter, Douglas R. *Gödel, Escher, Bach: an eternal golden braid*. Basic Books, Inc., Publishers, New York, 1979. xxi+777 pp. ISBN: 0-465-02685-0

Kac, Mark; Rota, Gian-Carlo; Schwartz, Jacob T. *Discrete thoughts. Essays on mathematics, science, and philosophy*. Revised and corrected reprint of the first edition. With the assistance of Peter Renz. Birkhuser Boston, Inc., Boston, MA, 1992. xii+266 pp. ISBN: 0-8176-3636-6

Kac, Mark *Enigmas of chance. An autobiography*. Alfred P. Sloan Foundation. Harper & Row, Publishers, New York, 1985. xxviii+163 pp. ISBN: 0-06-015433-0

Kline, Morris *Mathematical thought from ancient to modern times*. Vols. 1, 2, 3. Second edition. The Clarendon Press, Oxford University Press, New York, 1990. xviii+390+xxii pp. ISBN: 0-19-506135-7

Körner, T. W. *The pleasures of counting*. Cambridge University Press, 1996 ISBN: 0-521-56823-4.

Monastyrsky, Michael *Modern mathematics in the light of the Fields medals*. Translated from the 1991 Russian original by Roger Cooke and revised by the author. With a foreword by Freeman Dyson. A K Peters, Ltd., Wellesley, MA, 1997. xvi+160 pp. ISBN: 1-56881-065-2

- Moore, Gregory H. *Zermelo's axiom of choice. Its origins, development, and influence.* Studies in the History of Mathematics and Physical Sciences, 8. Springer-Verlag, New York, 1982. xiv+410 pp. (1 plate). ISBN: 0-387-90670-3
- Penrose, Roger *The emperor's new mind. Concerning computers, minds, and the laws of physics.* With a foreword by Martin Gardner. The Clarendon Press, Oxford University Press, New York, 1989. xiv+466 pp. ISBN: 0-19-851973-7
- Reid, Constance *From zero to infinity. What makes numbers interesting.* Fifth edition. Fiftieth anniversary edition. A K Peters, Ltd., Wellesley, MA, 2006. xviii+188 pp. ISBN: 978-1-56881-273-1; 1-56881-273-6
- Ronan, Mark *Symmetry and the Monster: One of the Greatest Quests of Mathematics.* Oxford University Press, 2007. ISBN-10: 0-19-280723-4 ISBN-13: 978-0-19-280723-6
- Ruelle, David *Chance and chaos.* Princeton University Press, Princeton, NJ, 1991. xii+195 pp. ISBN: 0-691-08574-9
- Sandifer, C. Edward *How Euler Did It,* Mathematical Association of America, 2007.
- du Sautoy, Marcus *The music of the primes. Searching to solve the greatest mystery in mathematics.* HarperCollins Publishers, New York, 2003. x+335 pp. ISBN: 0-06-621070-4
- Singh, Simon *Fermat's enigma. The epic quest to solve the world's greatest mathematical problem.* Walker and Company, New York, 1997. xx+315 pp. ISBN: 0-8027-1331-9
- Stewart, Ian *Letters to a young mathematician.* Basic Books, New York, 2006. xii+210 pp. ISBN: 978-0-465-08231-5; 0-465-08231-9
- Stewart, Ian *Does God play dice? The new mathematics of chaos.* Second edition. Blackwell Publishers, Oxford, 2002. xii+401 pp. ISBN: 0-631-23251-6
- Varadarajan, V. S. *Euler through time: A new look at old themes.* American Mathematical Society, 2006. ISBN: 978-0-8218-3580-7.
- Wilson, Robin *Four colors suffice. How the map problem was solved.* Princeton University Press, Princeton, NJ, 2002. xiv+262 pp. ISBN: 0-691-11533-8
- Yandell, Benjamin H. *The honors class. Hilbert's problems and their solvers.* A K Peters, Ltd., Natick, MA, 2002. x+486 pp. ISBN: 1-56881-141-1