Reading List

This is a selection of articles, notes and books suggested by researchers at Adelaide. You can also find more information about Pure Maths at Adelaide on the school (`http://www.maths.adelaide.edu.au/`) and IGA (`http://www.iga.adelaide.edu.au/`) websites.

Non-technical articles

- Interview with Michael Atiyah and Isadore Singer, `http://www.ams.org/notices/200502/comm-interview.pdf`

- Article by Shing-Tung Yau and Steve Nadison String, *String Theory and the Geometry of the Universe's Hidden Dimensions*, `http://www.ams.org/notices/201108/rtx110801067p.pdf`

- Article by Martin Gutzwiller, *Quantum Chaos*, `http://www.scientificamerican.com/article/quantum-chaos-subatomic-worlds/`

- Advice to a young Mathematician by Sir Michael Atiyah, `http://press.princeton.edu/chapters/gowers/gowers_VIII_6.pdf`

Introductory articles, notes or books

- Notes on Ellipticity and hyperbolicity in geometric complex analysis by Finnur Larusson `http://www.maths.adelaide.edu.au/finnur.larusson/misc/WinterSchool09.pdf`

- Notes on Index Theory by Hang Wang `http://www.maths.adelaide.edu.au/hang.wang/resources/HWang-Index-Theory.pdf`

- Article by Brian Hall *An Elementary Introduction to Groups and Representations* `http://arxiv.org/pdf/math-ph/0005032v1.pdf`

- Text on Symmetry by Hermann Weyl `https://archive.org/details/Symmetry_482`

- Article by A.J. Coleman, *The greatest mathematical paper of all time*, `http://link.springer.com/article/10.1007/BF03025189`

- Article by Ethan D. Boker *The Spinor Spanner*, `http://www.jstor.org/stable/2318771?origin=crossref&seq=2#page_scan_tab_contents`

More advanced articles, notes or books

- The Princeton Companion to Mathematics edited by Timothy Gowers, June Barrow-Green and Imre Leader, (available as an ebook through the library)

- Notes on Lie Groups and Lie Algebras by Thomas Leistner, `http://www.maths.adelaide.edu.au/thomas.leistner/AMSI2011revised2012.pdf`

- Notes on Index Theory by Mathai Varghese,

    - `http://www.maths.adelaide.edu.au/mathai.varghese/lecture1.pdf`
    - `http://www.maths.adelaide.edu.au/mathai.varghese/lecture2.pdf`
    - `http://www.maths.adelaide.edu.au/mathai.varghese/lecture3.pdf`

- Text by Jonathan Rosenberg on T-duality, *Topology, C*-Algebras, and String Duality* (available in the library)

- Free e-text by Gilkey on the Atiyah-Singer index theorem, `http://www.maths.ed.ac.uk/~aar/papers/gilkey1.pdf`

- Survey by Steve Zelditch, *:ocal and global behaviour of eigefunctions*, `http://arxiv.org/pdf/0903.3420v1.pdf`

- Article by Michael Murray, *An Introduction to Bundle Gerbes*, `http://arxiv.org/pdf/0712.1651v3.pdf`

Popular science books about mathematicians

- Douglas Hofstadter *Gödel, Escher, Bach*

- Jordan Ellenberg *How Not to Be Wrong: The Power of Mathematical Thinking*

- Andrew Hodges *Alan Turing: The Enigma*

- Simon Singh *The Code Book: The Science of Secrecy from Ancient Egypt to Quantum Cryptography*

- Ian Stewart *Letters to a Young Mathematician*

- Paul Hoffman *The Man Who Loved Only Numbers*

- Jame Gleick *Chaos*

- Benjamin Woolley *The Bride of Science*

- Simon Singh *Fermat's Last Theorem*

- Barry Mazur *Imagining Numbers*

- Brian Clegg *Infinity: The Quest to Think the Unthinkable*

- Tom Petsinis *The French Mathematician*