Harmonic Analysis Workshop
Book Club

August 16, 2024

The "Book club" idea is to connect early-career workshop participants (including students!), start maths chats and discussions with each other and find common interests. One of the ways we suggest is to study topics connected with number theory and/or harmonic analysis in a group inspired by a book or an article. We could split in a few groups according to a topic of interest, and participants are very welcome to suggest their own article or book, or a maths problem, or just a topic for discussion.

We list below some options, which can start some discussions and be of interest:

- Books: [Weil, 1995], [Montgomery, 1994], [Ceccherini-Silberstein et al., 2018]

- Articles: [Sally, 1998] and [Cohn and Elkies, 2003]

If you have any questions or suggestions, let Valeriia on v.starichkova@unsw.edu.au know!

References

[Ceccherini-Silberstein et al., 2018] Ceccherini-Silberstein, T., Scarabotti, F., and Tolli, F. (2018). *Discrete harmonic analysis*, volume 172 of *Cambridge Studies in Advanced Mathematics*. Cambridge University Press, Cambridge. Representations, number theory, expanders, and the Fourier transform.

[Cohn and Elkies, 2003] Cohn, H. and Elkies, N. (2003). New upper bounds on sphere packings. I. *Ann. of Math. (2)*, 157(2):689–714.

[Montgomery, 1994] Montgomery, H. L. (1994). *Ten Lectures on the Interface Between Analytic Number Theory and Harmonic Analysis*, volume 84. Conference Board of the Mathematical Sciences, Washington, DC; by the American Mathematical Society, Providence, RI.

[Sally, 1998] Sally, Jr., P. J. (1998). An introduction to p-adic fields, harmonic analysis and the representation theory of SL_2. *Lett. Math. Phys.*, 46(1):1–47.

[Weil, 1995] Weil, A. (1995). *Basic number theory*. Classics in Mathematics. Springer-Verlag, Berlin. Reprint of the second (1973) edition.