Resources: References for the course

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2024-01-07

Abstract

A bibliography for the *references* I plan to use in the course.

References for *Representations of finite groups*

- These notes (Milne n.d.) Group Theory Notes are available on-line; Chapter 7 contains a treatment of representations of finite groups.
- (James and Liebeck 2001)
- (Serre 1977)
- I hope to briefly discuss the Fast Fourier Transform, and I'll probably follow (Ceccherini-Silberstein, Scarabotti, and Tolli 2018) for that discussion.

References for *Error correcting codes*

- (Huffman and Pless 2003) is available electronically at *Tisch Library*
- (Ball 2020)
- These notes of Spence (Spence 2002) are available here
- (Tsfasman, Vlăduţ, and Nogin 2007)

References for *Formalization of mathematics*

For our discussion of *proof assistants* and formalization of math, I'm going to use the `Lean` language; the `Lean` community web site is here: https://leanprover-community.github.io/.

Learning resources for `Lean` may be found here. They include the following:

- (Avigad and Massot n.d.) Mathematics in Lean
- (Avigad et al. n.d.) Theorem Proving in Lean
- (MacBeth n.d.) The Mechanics of Proof

Bibliography

Bibliography

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Ball, Simeon. 2020. *A Course in Algebraic Error-Correcting Codes*. Compact Textbooks in Mathematics. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-41153-4.

Ceccherini-Silberstein, Tullio, Fabio Scarabotti, and Filippo Tolli. 2018. *Discrete Harmonic Analysis: Representations, Number Theory, Expanders, and the Fourier Transform*. Cambridge Studies in Advanced Mathematics. Cambridge: Cambridge University Press. https://doi.org/10.1017/9781316856383.

Huffman, W. Cary, and Vera Pless. 2003. *Fundamentals of Error-Correcting Codes*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511807077.

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MacBeth, Heather. n.d. “The Mechanics of Proof.” https://hrmacbeth.github.io/math2001/. Accessed January 11, 2024.

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Serre, Jean-Pierre. 1977. *Linear Representations of Finite Groups*. Springer-Verlag, New York-Heidelberg.

Spence, S. 2002. “Introduction to Algebraic Coding Theory.”

Tsfasman, Michael, Serge Vlăduţ, and Dmitry Nogin. 2007. *Algebraic Geometric Codes: Basic Notions*. Vol. 139. Mathematical Surveys and Monographs. American Mathematical Society. https://doi.org/10.1090/surv/139.