Info

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Fourier transform of measurable subsets

Let

$$A \subseteq \mathbb{R}^d$$

be measurable. Then

$$\hat{1}_A(\xi) := \int_A \exp(-2\pi i \langle x, \xi \rangle)$$

is the Fourier transform *of* A.

[1]

Current note has 0 direct children and 0 total descendants.

- stamp stamp
  - Rf subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
    - Fourier
      - subsets Fourier transform of measurable subsets

And it has 10 siblings.

- stamp stamp
  - Rf subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
    - Fourier
      - L2 bdint Fourier transform on $L^2(-A, A) \leq L^2(\mathbb{R})$
      - L2 Rpos to Hardy2 upper 1 $\widehat{\ } : L^2(0, \infty) \cong_{\mathsf{Hilb}} \mathscr{O}^2(H^2_{\mathrm{U}})$
      - Rn Fourier transform on $\mathbb{R}^n$
      - S1 Fourier transform on S^1, Fourier series on $[0, 1]$
      - S1 abs Functions on S^1 with absolutely converging Fourier series, $\check{l}^1(S^1)$
      - S1 dist Fourier transform of distributions on S^1
      - S1 L1toC0 $\widehat{\ } : L^1[0, 1] \to \mathcal{C}_0(\mathbb{Z}, \mathbb{C})$

- S1 L2tol2 $\widehat{\ } : L^2[0,1] \cong_{\mathsf{Hilb}} l^2(\mathbb{Z}, \mathbb{C})$
- subsets Fourier transform of measurable subsets
- unsharp Unsharpness principles

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1. https://chessapig.github.io/files/presentations/brion_fourier.pdf ↩