Info

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Functions with uniformly bounded mean oscillations on dyadic cubes

Definition. Functions with uniformly bounded mean oscillations on dyadic cubes

Let $f \in L^1_{\mathsf{loc}}(\mathbb{R}^d)$ and

$$\|f\|_{\mathrm{DMO}} := \sup\left\{\frac{1}{m(Q)}\int_Q\left|f - \frac{1}{m(Q)}\int_Q f\right| \middle| Q \text{ is a dyadic cube in } \mathbb{R}^d\right\}$$

and

$$\mathrm{DMO} := \frac{\{f \in L^1_{\mathsf{loc}}(\mathbb{R}^d) | \|f\|_{\mathrm{DMO}} < \infty\}}{\{\text{functions that are constant aeon } \mathbb{R}^d\}}$$

> **Proposition:**
>
> $$\mathrm{BMO} \subset \mathrm{DMO}$$

[1]

Current note has 0 direct children and 0 total descendants.

- stem
  - subobjects of and functions on $\mathbb{R}^n, S^n, \mathbb{C}^n$ and its quotients $_\Gamma\backslash^{\mathbb{R}^n}, _\Gamma\backslash^{\mathbb{C}^n}$
    - Lebesgue measurable subsets of and functions on $\mathbb{R}^n, T^n, S^n$
      - Functions with uniformly bounded mean oscillations on dyadic cubes

And it has 15 siblings.

- stem
  - subobjects of and functions on $\mathbb{R}^n, S^n, \mathbb{C}^n$ and its quotients $_\Gamma\backslash^{\mathbb{R}^n}, _\Gamma\backslash^{\mathbb{C}^n}$
    - Lebesgue measurable subsets of and functions on $\mathbb{R}^n, T^n, S^n$
      - Functions with uniformly bounded mean oscillations on cubes
      - Decomposition of $f \in L^p$ into bounded and unbounded parts
      - Calderon-Zygmund decomposition
      - Lebesgue density of measurable sets
      - Functions with uniformly bounded mean oscillations on dyadic cubes
      - Volterra operator $\int_{[0,-]} : L^1_{\mathsf{loc}}[0,1) \to \mathcal{C}[0,1)$
      - Measurable functions on $\mathbb{R}^n$
      - (ϵ, n)-measurable function
      - Integrability and integral of measurable functions on $\mathbb{R}^n$
      - Hardy-Littlewood maximal functions of $L^1_{\mathsf{loc}}(\mathbb{R}^n)$
      - Lebesgue averaging and differentiation
      - Integrals of a monotonically converging sequence of functions
      - Lebesgue integral from measure of undergraph
      - $L^{p,q}$
      - $\mathrm{E}([0,1]) = \mathrm{E}(0,1), \mathrm{E}([-\pi,\pi]) = \mathrm{E}(S^1)$

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1. https://math.aalto.fi/~jkkinnun/files/harmonic_analysis.pdf ↩