Info

This note found here
as a part of a collection
is written (completely with human hands) by Rupadarshi Ray,
created on December 11, 2024 5:50:03 PM,
and was last modified on May 24, 2026 6:41:49 PM.

$$\mathcal{C}^1([a,b],\mathbb{R})$$

To add some to what u/sleeps_with_crazy said $\mathcal{C}[0,1]$ with a Gaussian measure is called Wiener space - that is, it is where Brownian motion lives. Lots of cool stuff happens if you interpret what he says in this case. [1]

- norms
  - stamp.Rf.derivative.space.cpt_1.sup_norm
  - sum sup norm
  - L^p norm
- End
  - stamp.Rf.derivative.space.cpt_1.End_d

Current note has 2 direct children and 2 total descendants.

- stamp stamp
  - Rf subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
    - derivative Differentiable functions
      - space Space of continuous and continuously differentiable functions on $\mathbb{R}$
        - cpt_1 $\mathcal{C}^1([a,b],\mathbb{R})$
          - End_d Derivative operator on $\mathcal{C}^1[a,b]$
          - sup_norm $(\mathcal{C}^1([a,b],\mathbb{R}), \|\ \|_\infty)$

And it has 2 siblings.

- stamp stamp
  - Rf subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
    - derivative Differentiable functions
      - space Space of continuous and continuously differentiable functions on $\mathbb{R}$

- cpt 1 $\mathcal{C}^1([a,b],\mathbb{R})$
- open with cpt supp k $\mathcal{C}^k_c((a,b),\mathbb{R})$

---

1. https://www.reddit.com/r/math/comments/a6bptc/comment/ebtn9bu/?utm_source=share&utm_medium=web3x&utm_name=web3xcss&utm_term=1&utm_content=share_button ↩