

Calderón-type theorems

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We briefly summarize known results concerning interpolation theory in the setting of Lorentz spaces and mention how classical operators behave in this setting. We establish Calderón-type theorems for operators bounded on non-standard end-point Lorentz spaces

$$T: L^{p,q_0}(\mathcal{R}, \mu) \rightarrow L^{p,q_1}(\mathcal{S}, \nu) \quad \text{and} \quad T: L^{q_1,1}(\mathcal{R}, \mu) \rightarrow L^\infty(\mathcal{S}, \nu)$$

and the improvement of target spaces which is intimately connected with this. We connect the said improvement with the new $Y^{\langle p,q_1 \rangle}$ spaces, a structure generalizing $Y^{\langle p \rangle}$ spaces which appeared in [1] and were studied in [2].

REFERENCES

- [1] A. Cianchi, L. Pick and L. Slavíková, Sobolev embeddings, rearrangement-invariant spaces and Frostman measures, *Ann. Inst. H. Poincaré C Anal. Non Linéaire* **37** (2020), no. 1, 105–144.
- [2] H. Turčinová, Basic functional properties of certain scale of rearrangement-invariant spaces, *Math. Nachr.* **296** (2023), no. 8, 3652–3675.