

Regularity properties of Schrödinger operators

Tao Ma, P. R. Stinga, J. L. Torrea, Chao Zhang

(Submitted on 1 Jul 2011 (v1), last revised 4 Oct 2011 (this version, v2))

Let L be a Schrödinger operator of the form $L = -\Delta + V$, where the nonnegative potential V satisfies a reverse Hölder inequality. Using the method of L -harmonic extensions we study regularity estimates at the scale of adapted Hölder spaces. We give a pointwise description of L -Hölder spaces and provide some characterizations in terms of the growth of fractional derivatives of any order and Carleson measures. Applications to fractional powers of L and multipliers of Laplace transform type developed.

Comments: 20 pages. To appear in Journal of Mathematical Analysis and Applications

Subjects: **Analysis of PDEs (math.AP)**; Classical Analysis and ODEs (math.CA); Functional Analysis (math.FA)

Cite as: [arXiv:1107.0184](https://arxiv.org/abs/1107.0184) [math.AP]
(or [arXiv:1107.0184v2](https://arxiv.org/abs/1107.0184v2) [math.AP] for this version)

Submission history

From: Pablo Raúl Stinga [[view email](#)]

[v1] Fri, 1 Jul 2011 10:25:18 GMT (27kb)

[v2] Tue, 4 Oct 2011 12:47:59 GMT (23kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

math.AP

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[math](#)

[math.CA](#)

[math.FA](#)

References & Citations

- [NASA ADS](#)

Bookmark (what is this?)

