



Convergence of operator-semigroups associated with generalised elliptic forms

Delio Mugnolo, Robin Nittka

(Submitted on 7 Jul 2011 (v1), last revised 3 Aug 2011 (this version, v2))

In a recent article, Arendt and ter Elst have shown that every sectorial form is in a natural way associated with the generator of an analytic strongly continuous semigroup, even if the form fails to be closable. As an intermediate step they have introduced so-called j -elliptic forms, which generalises the concept of elliptic forms in the sense of Lions. We push their analysis forward in that we discuss some perturbation and convergence results for semigroups associated with j -elliptic forms. In particular, we study convergence with respect to the trace norm or other Schatten norms. We apply our results to Laplace operators and Dirichlet-to-Neumann-type operators.

Comments: 22 pages

Subjects: **Functional Analysis (math.FA)**; Mathematical Physics (math-ph); Analysis of PDEs (math.AP)

MSC classes: Primary: 47D06, Secondary: 47B10

Cite as: **arXiv:1107.1366v2 [math.FA]**

Submission history

From: Delio Mugnolo [[view email](#)]

[v1] Thu, 7 Jul 2011 12:45:55 GMT (26kb)

[v2] Wed, 3 Aug 2011 18:49:39 GMT (27kb,D)

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

Download:

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

Current browse context:

math.FA

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

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

Change to browse by:

[math](#)

[math-ph](#)

[math.AP](#)

References & Citations

- [NASA ADS](#)

Bookmark ([what is this?](#))

