

A FUNCTIONAL ANALYTIC PERSPECTIVE TO THE DIV-CURL LEMMA

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ABSTRACT

In this talk we discuss the celebrated div-curl lemma in the context of closed linear operator sequences in Hilbert spaces. With this structural insight at hand, it is easy to identify sufficient non-trivial boundary conditions to obtain global versions of the div-curl lemma, which we will exemplify shortly in the talk. Furthermore, it is possible to obtain div-curl lemma type results in various other contexts. One of which being connected to a recently found sequence of linear closed operators related to the boundary value problem for the biharmonic operator. The talk is based on [1].

REFERENCES

- [1] M. Waurick, A Functional Analytic Perspective to the div-curl Lemma, *Journal of Operator Theory*, accepted, 2017, see also <https://arxiv.org/abs/1703.09593>