

SUBNORMALITY VERSUS RESTRICTIONS

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Let S be a densely defined operator in a Hilbert space \mathcal{H} having invariant domain, that is, $S\mathcal{D}(S) \subset \mathcal{D}(S)$. Set $\mathcal{D}_f := \{p(S)f : p \in \mathbb{C}[z]\}$ and $\mathcal{H}_f := \text{clo } \mathcal{D}_f$. Apparently $S_f := S|_{\mathcal{D}_f}$ is densely defined in \mathcal{H}_f .

QUESTION. *Is S subnormal if so is S_f for any $f \in \mathcal{D}(S)$?*

References

- [1] F. H. Szafraniec, *Subnormality and cyclicity*, in: Topological Algebras, Their Applications, and Related Topics, K. Jarosz and A. Sołtysiak (eds.), Banach Center Publ. 67, Inst. Math., Polish Acad. Sci., Warszawa, 2005, 349–356.