İSTANBUL ANALYSIS SEMINARS

GLOBAL EIGENVALUES OF CYCLICALLY COMPACT OPERATORS IN KAPLANSKY−HILBERT MODULES

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Abstract: The concept of Kaplansky−Hilbert module was introduced by I. Kaplansky in [1] under the name AW^*-module. Cyclically compact sets and operators in lattice-normed spaces were introduced by A. G. Kusraev, see [2]. In particular, a general form of cyclically compact operators in Kaplansky−Hilbert modules, which is similar to the Schmidt representation of compact operators on Hilbert spaces, as well as a variant of the Fredholm alternative for cyclically compact operators, were also given. Thus, cyclically compact operators deserve an independent study. In this talk, we will introduce and study some properties of global eigenvalues of cyclically compact operators in Kaplansky−Hilbert modules. Additionally, we will give a variant of Horn- and Weyl-type inequalities and Lidskiĭ trace formula for cyclically compact operators.

References

[1] I. Kaplansky, "Modules over operator algebras," *Amer. J. Math.* **75** (1953), no. 4, 839-858.

[2] A.G. Kusraev, *Dominated Operators*, Kluwer Academic Publishers, Dordrecht, 2000.

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