

İSTANBUL ANALYSIS SEMINARS

POSITIVE COMMUTATORS ON BANACH LATTICES

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Abstract: Let A and B be bounded operators on a Banach lattice E such that the commutator $C = AB - BA$ and the product BA are positive operators. If the product AB is a power-compact operator, then C is a quasi-nilpotent operator having a triangularizing chain of closed ideals of E . If the resolvent set of the operator C is connected, then C is not invertible. Some related results will be also discussed.

References

- [1] J. Bračič, R. Drnovšek, Y.B. Farforovskaya, E.L. Rabkin, J. Zemánek, “On positive commutators,” *Positivity* **14** (2010), no. 3, 431-439.
- [2] R. Drnovšek, M. Kandić, “More on positive commutators,” *J. Math. Anal. Appl.* **373** (2011), no. 2, 580–584.
- [3] R. Drnovšek, “Once more on positive commutators,” *Studia Math.* **211** (2012), no. 3, 241-245.

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