

Some results on spectral properties of algebras and the algebra of linear operators on an algebra

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There are many books and papers written on properties of spectrum of an element in a Banach algebra or about the properties of the algebra of linear operators on a Banach algebra. Actually, these notions of spectrum and linear operators are purely algebraic and therefore it would be natural to study them in an algebraic way as far as possible.

In this talk we offer some generalisations of results known for Banach algebras. In our setting, the first task was to find out, which properties of algebras were actually used in the proofs. Second task was to formulate these conditions in an algebraic matter and to try to obtain generalisations in algebraic setting/language, including (arbitrary!) topology only when we were not able to avoid it. Perhaps the participants of the conference can recognise some results and give us some indications, where similar results have been obtained in such or even in more general setting.