

On generalized invertibility of operators

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In this talk, we will first report some recent results on the general invertibility of the products and differences of idempotents and generalized projections. The invertibility, the group invertibility and the k -potency of the linear combinations of idempotents are investigated. Second we will give some common characterizations and various individual properties of the star ordering, the left star ordering, the right star ordering and the minus partial ordering of bounded operators on a Hilbert space. The several properties for which the common star lower or star upper bound exists regarding the relationships among operators and projections are given. The much simpler matrix representations with respect to star order relation are obtained.
