

Preserver Problems on Quantum Structures

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Abstract: Preserver problems concern the question of determining or describing the general form of all transformations of a given structure X which preserve

- a quantity attached to the elements of X , or
- a distinguished set of elements of X , or
- a given relation among the elements of X ,

etc. Such problems arise in most parts of mathematics although they are studied systematically only in matrix theory and, recently, in operator theory. In this talk we give a short general overview of this area of research and then discuss preserver problems on some quantum structures in more details.