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**Title:** Linear maps that preserve matrices annihilated at some fixed vector by a polynomial of degree two

**Author(s):** Constantin Costara

In this paper, we characterize linear maps on the space of all  $n \times n$  complex matrices which preserve the set of matrices  $T$  such that, for some fixed complex numbers  $s$  and  $p$  and some fixed nonzero vector  $x_0 \in \mathbb{C}^n$ , satisfy the equality

$$T^2(x_0) - sT(x_0) + px_0 = 0.$$

**Address:**

Constantin Costara  
Faculty of Mathematics and Informatics  
Ovidius University of Constanta  
Mamaia Boul. 124  
900527, Constanta  
Romania