



## SURJECTIVE ADDITIVE RANK-1 PRESERVERS ON HESSENBERG MATRICES\*

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**Abstract.** Let  $H_n(\mathbb{F})$  be the space of all  $n \times n$  upper Hessenberg matrices over a field  $\mathbb{F}$ , where  $n$  is a positive integer greater than two. In this paper, surjective additive maps preserving rank-1 on  $H_n(\mathbb{F})$  are characterized.

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