THE HAFNIAN AND A COMMUTATIVE ANALOGUE OF THE GRASSMAN ALGEBRA

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Abstract. A close relationship between the determinant, the pfaffian, and the Grassmann algebra is well-known. In this paper, a similar relation between the permanent, the hafnian, and a commutative analogue of the Grassmann algebra is described. Using the latter, some new properties of the hafnian are proved.

Key words. Hafnian, Permanent, Pfaffian, Determinant, Grassmann algebra.

AMS subject classifications. 15A15, 15A75, 15A78.