

T. M. OSIPCHUK<sup>1</sup>, M. V. TKACHUK<sup>2</sup>

## Questions of Linear Convexity in $\mathbb{H}^n$

*Institute of Mathematics, Kyiv, Ukraine*  
E-mail: <sup>1</sup>otm82@mail.ru, <sup>2</sup>mtkachuk@mail.ru

Notion of lineal convexity is one of the most impotent in complex analysis. In the work we considered analogs of this notion and some related to it theorems in the case of  $n$ -dimensional quaternion space  $\mathbb{H}^n$ . The main result is a criterion of linear convexity of complete Hartogs domain in  $\mathbb{H}^n$  in the terms of positive semidefinite quadratic form in the complex tangent planes at the boundary points.

- [1] T.M. Osipchuk, Analitic conditions of local linear convexity in  $\mathbb{H}^n$ , *Zb. prats of the Inst. of Math. of NASU*, **3**, (2005), No 3., p. 244-254. (in Ukrainian).