

1071-32-260

Ruzimbay Masharipovich Madrakhimov* (mruzimbay@mail.ru), 14, H.Olimjan street,
Urgench, Khorezm 220100, Uzbekistan. *Criterion of pluriharmonicity of harmonic functions.*

We proved the criterion of pluriharmonicity of harmonic functions in terms of cut-functions. Let $u(z) \in C^2(D)$, $D \subset \mathbb{C}^n$ be a function such that $\Delta u = 0$ in a neighborhood of some fixed point $z^0 \in D$ and that

$$\sum_{i,j=1}^n (z_i - z_i^0) (\bar{z}_j - \bar{z}_j^0) (D_i \bar{D}_j u)(z) \geq 0.$$

Then $u(z)$ pluriharmonic in D . (Received March 09, 2011)