



ON THE NORMAL FAMILIES OF DIFFERENCE  
POLYNOMIALS

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**Abstract**

In this paper, we investigate normal families of difference polynomials of homomorphic or meromorphic functions. Let  $\mathcal{F}$  be a family of holomorphic functions in  $D$ . Suppose that  $n \geq 2$  is an integer and  $b$  is a non-zero constant. If for any function  $f$  in  $\mathcal{F}$ ,  $\exists \eta > 0$ ,  $\forall d$ ,  $|d| < \eta$ ,  $f^n(z)(f(z)-1)f(z+d) \neq b$  in  $E$ , then  $\mathcal{F}$  is normal in  $D$ .

**Keywords and phrases:** normal family, meromorphic function, difference.

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