

**Pascu, Nicolae N.; Petrila, Titus**

**A quasiconformal extension of conformal mappings. I.** (English) Zbl 0885.30016  
*Mathematica* 38(61), No. 1-2, 153-156 (1996).

Let  $f(z) = z + a_2z^2 + \dots$  be regular in the unit disk  $U(|z| < 1)$  and  $f'(z) \neq 0$  in  $U$ . By constructing a Löwner chain, the authors prove that if there exists  $q \in (0, 1)$  such that

$$(1 - |z|^2)^2 |S_f(z)|/2 \leq q, \quad z \in U,$$

then  $f$  is univalent in  $U$  and has a  $k$ -quasiconformal extension to  $U^-(|z| > 1)$ , where  $S_f(z)$  is the Schwarzian derivative of  $f$  and  $k = (1 + q)/(1 - q)$ .

Reviewer: [L.Liu \(Harbin\)](#)

**MSC:**

**30C62** Quasiconformal mappings in the complex plane

**Keywords:**

Löwner chain;  $k$ -quasiconformal extension; Schwarzian derivative