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**Christopher J. Morgan\*** (cmorgan@ms.uky.edu), Department of Mathematics, 902 Patterson Office Tower, Lexington, KY 40506-0027. *Density of a Class of Polynomials in the Class  $S_H^0$  of Sense-Preserving Harmonic Functions, Preliminary Report.* Preliminary report.

In the paper *Harmonic Univalent Polynomials*, Complex Variables, Vol. 35, pp. 93–107, T.J. Suffridge introduced a class of sense-preserving harmonic polynomials defined on the unit disk in the complex plane. These polynomials may be written in the form  $f = \bar{g} + h$ , where  $g$  and  $h$  are polynomials in  $z$  that satisfy  $g(0) = h(0) = g'(0) = 0$ . Moreover, for a polynomial  $f$  of degree  $n$  in this class,  $f$  may be expressed in terms of  $g$  and  $h$  as follows:  $h'(z) = Q(z) + e^{i\theta}(1-t)z\hat{Q}(z)$ ,  $g'(z) = e^{i\beta}tz\hat{Q}(z)$ , where  $\theta, \beta$ , and  $t$  are real,  $0 \leq t \leq 1$ ,  $Q(z)$  is a polynomial in  $z$  of degree less than or equal to  $n-2$  satisfying  $Q(0) = 1$ , and where  $\hat{Q}(z) = z^{n-2}\overline{Q(1/\bar{z})}$ . We will show that polynomials of this form are dense in the class  $S_H^0$  of sense-preserving harmonic functions. (Received September 14, 2000)