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Subramanian.** *Hypergeometric functions and subclasses of Harmonic Mappings.*

The seminal works of Clunie and Sheil-Small (1984) and Sheil-Small (1990) on harmonic mappings as generalizations of conformal mappings gave rise to investigation of properties of subclasses of harmonic univalent functions. Yalcin and Ožtruk (2004) introduced a class $HP(\alpha)$ of functions harmonic and univalent in the unit disc. While connections between analytic univalent functions and hypergeometric functions have been well explored, only a few investigations on analogous connections between hypergeometric functions and harmonic mappings have taken place. Here sufficient conditions for a hypergeometric function and an integral operator related to hypergeometric function to be in the class $HP(\alpha)$ are obtained. Additional constraints give coefficient characterizations of the classes. (Received September 22, 2010)