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Om P Ahuja* (oahuja@kent.edu), Kent State University, 14111 Claridon Troy Road, Burton, OH 44021. *Convolution Products of Harmonic Mappings in the Plane and Hypergeometric Functions.*

The study of hypergeometric functions in the theory of harmonic mappings in the plane can be motivated by well-established connections of special functions in the theory of analytic univalent functions. Harmonic mappings in the plane are univalent complex-valued harmonic functions which map the open unit disc onto a domain. Such mappings have a two-sided power series structure consisting of the 'analytic part' and 'co-analytic part'. In the present paper we investigate geometric properties for convolution products of the planar harmonic mappings and Gaussian hypergeometric and confluent hypergeometric functions. (Received February 20, 2006)