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*Orthogonal Polynomials in Several Non-Commuting Variables.*

We investigate a certain class of Hankel-like positive definite kernels using their associated orthogonal polynomials. The main result of this paper is about the structure of this kind of kernel. We establish a connection between moments and Jacobi coefficients, and also describe the Jacobi coefficients of the free products of orthogonal polynomials. (Received September 28, 2005)