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Troy Banks* (tvbanks@salisbury.edu), Department of Math and Computer Science, Salisbury University, 1101 Camden Ave, Salisbury, MD 21801. *On the structure of a class of Invariant Kernels.*

We study the structure of a certain class of Toeplitz-like positive definite kernels on the free semigroup on N generators. We explore some possible applications to multiscale processes and to learning with kernels. Associated classes of orthogonal polynomials are also investigated. (Received September 25, 2012)