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**Troy V Banks\*** (tvbanks@salisbury.edu), Department of Math and Computer Science,  
Salisbury University, 1101 Camden Ave, Salisbury, MD 21801. *On the structure of certain class of  
Toeplitz-like 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 22, 2011)