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**Emma Previato\*** (ep@bu.edu), Dept of Mathematics & Statistics, Boston University, Boston, MA 02215. *Trigonal Cyclic Curves: Modular Aspects.*

The classical relevance of cyclic curves was expanded at the end of the last century by their relevance in mathematical physics, witness the 2011 Springer monograph by H.M. Farkas, S. Zemel, “Generalizations of Thomae’s Formula for  $Z_n$  Curves”; little is known about the pertaining modular functions. This talk focuses on  $Z_3$  curves over a family with a nodal singular fiber. Although the Riemann theta function does not have a finite limit, we extend analytically the sigma function for the singular curve. We pose the question of completing the family to a fibration, by inserting an incomplete lattice and exploiting the modular properties of the sigma function. We will discuss a generalization of these constructions for  $Z_n$  curves. This work is the result of collaboration with K. Aomoto, Yu. Fedorov, J. Komeda, S. Matsutani. (Received December 25, 2019)