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Yaacov Kopeliovich* (ykopeliovich@yahoo.com). *Speciale identities for cyclic covers of order 3 and representation theory of Symmetric group.*

Obtain special theta identities satisfied by period matrices of cyclic covers of the Sphere. Our methods involve the representation theory of Symmetric groups and Thomae formula for cyclic covers discovered by Bershadsky and Radul. The conjectural connection of this result to the monodromy action of the mapping class group and vanishing properties of theta functions on Riemann Surfaces is explained.

We suggest further developments of computational nature with applications to Complex multiplication, generalized Schottky problem and fast computation of theta functions will be outlined. (Received August 29, 2006)