

# The group $S_{(q)}$ and indications of functional equations in finite characteristic

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We discuss the group  $S_{(q)}$  of homeomorphisms of  $Z_p$  which has the cardinality of the continuum. The computational evidence shows that this group should be involved in a functional equation for characteristic  $p$  zeta functions. We show how  $S_{(q)}$  gives rise to algebra automorphisms of the convolution group of measures in characteristic  $p$ . Finally we show that the degrees (in  $x^{-1}$ ) of the special polynomials arising at  $-j$  is invariant of the action of  $S_{(q)}$  (i.e. the degree is invariant of permuting the  $q$ -expansion coefficients of  $j$ ).