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Silvia Montarani* (montarani@math.mit.edu), MIT, Room 2-251, 77 Massachusetts Av., Cambridge, MA 02139. *Finite dimensional representations of symplectic reflection algebras associated to wreath products.*

In this talk we will construct finite dimensional representations of the wreath product symplectic reflection algebra $H(k,c,N,G)$ of rank N attached to a finite subgroup G of $SL(2,C)$ (here k is a complex number and c a class function on the set of nontrivial elements of G). Our approach is deformation theoretic, and our method is based on Crawley-Boevey and Holland's results concerning the representation theory of the deformed preprojective algebra (Morita equivalent to the rank one wreath product symplectic reflection algebra) and on the cohomological properties of $H(k,c,N,G)$. Time permitting we will discuss the extension of these results to the case of continuous wreath product symplectic reflection algebras (i.e. when G is an infinite reductive subgroup of $SL(2,C)$). The first part of this talk is a joint work with Pavel Etingof. (Received January 13, 2007)