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**Jeffrey Yelton\*** ([jeffery.yelton@unimi.it](mailto:jeffery.yelton@unimi.it)). *Galois actions associated to hyperelliptic curves over local fields.*

To any hyperelliptic curve  $C$  over a field  $K$ , we consider the  $\ell$ -adic representation coming from the natural Galois action on the  $\ell$ -adic Tate module of its Jacobian. When  $K$  is a local field with residue characteristic  $p \geq 0$ , I will discuss an approach to determining the restriction of this  $\ell$ -adic action to the inertia subgroup  $I$  for each prime  $\ell \neq p$ , using a joint result with H. Hasson that describes the action of  $I$  on the prime-to- $p$  étale fundamental group of a punctured projective line. I will finish by presenting some results on global  $\ell$ -adic Galois images which arise as direct applications of such a description of the inertia action at various primes. (Received September 17, 2018)