1023-11-600 **Chris Hall*** (cjh@math.utexas.edu), Department of Mathematics, University of Texas, Austin, TX 78712. *Families of Twists and Inverse Galois.* Preliminary report.

Let $K = \mathbb{Q}(t)$ and E/K be an elliptic curve with non-constant j-invariant. To each $c \in \mathbb{Q}$ we associate the quadratic twist of E by the quadratic extension $K(\sqrt{c-t})$, so that we obtain a one-parameter family of twists. If we assume mild conditions on the reduction of E, then one can show that the $\mathbb{Z}/\ell$-monodromy group of that family is a big subgroup of a finite orthogonal group for almost all ℓ. We'll discuss the implications for the inverse Galois problem over the function field $\mathbb{Q}(c)$. (Received September 18, 2006)