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Alexander Abatzoglou, UCI, Irvine, CA, **Alice Silverberg***, UCI, Irvine, CA, **Andrew V. Sutherland**, MIT, Cambridge, MA , and **Angela Wong**, UCI, Irvine, CA. *Using elliptic curve with CM by $\sqrt{-7}$ to test primality.*

We use elliptic curves with complex multiplication by $\mathbb{Q}(\sqrt{-7})$ to test primality for integers of certain forms. This generalizes earlier work of B. Gross and of R. Denomme and G. Savin who dealt with elliptic curves with complex multiplication by $\mathbb{Q}(i)$ and $\mathbb{Q}(\sqrt{-3})$. We implement the test and search for large primes. (Received December 04, 2011)