

## **Update on curves of genus 3 with many rational points**

Noam Elkies, Harvard University

Curves  $C$  of genus 3, either quartic or hyperelliptic, can be obtained as linear slices of suitable K3 surfaces  $X$ . If  $X$  has  $N$  lines then  $C$  generally has at least  $N$  points, and may have considerably more. We report on our current records for genus-3 curves or families of curves, in both the quartic and hyperelliptic case, with many rational points.