1158-16-93   **Alexandru Chirvasitu*** (`achirvas@buffalo.edu`), **Ryo Kanda** and **Paul S. Smith**. *Elliptic algebras.*

Feigin and Odesskii's generalizations $Q_{n,k}(E, \tau)$ of Sklyanin algebras are parametrized by an elliptic curve E, a point τ on it, and a pair of coprime integers $1 \leq k \leq n$. They have the same Hilbert series as the polynomial ring in n variables and hence are non-commutative analogues of projective spaces. Their "classical points" are parametrized by certain products of symmetric powers of E which can then be regarded as subschemes of $(n - 1)$-dimensional projective space that "survive the deformation". The main results are that the algebras $Q_{n,k}(E, \tau)$ have the expected Hilbert series and global dimension and are Koszul for all choices of parameters. They are also AS-regular for generic choices of $\tau \in E$.

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