1100-13-309 **Ragnar-Olaf Buchweitz**, **Graham J. Leuschke*** (gjleusch@math.syr.edu) and **Michel Van den Bergh**. *Non-commutative desingularization of generic determinantal varieties.*

Let $X = (x_{ij})$ be a $m \times n$ matrix of indeterminates over a field k, let $S = k[\{x_{ij}\}]$ be the polynomial ring in those indeterminates, and let $R = S/I_t(X)$ be the quotient by the $t \times t$ minors of X. We construct a maximal Cohen-Macaulay R-module M such that the endomorphism ring $E = \mathrm{End}_R(M)$ is also maximal Cohen-Macaulay, and moreover has finite global dimension. In characteristic zero we give an explicit description of E by generators and relations. The proof is an object lesson in the usefulness of *geometric* homological methods in homological commutative algebra. (Received February 10, 2014)