Computational Methods

16-04

- [1] Werner Bley and Henri Johnston, Computing generators of free modules over orders in group algebras, J. Algebra **320** (2008), no. 2, 836–852. MR MR2422318
- Jon F. Carlson and Graham Matthews, Generators and relations for matrix algebras,
 J. Algebra 300 (2006), no. 1, 134–159. MR MR2228640
- [3] Alexander Chistov, Gábor Ivanyos, and Marek Karpinski, *Polynomial time algorithms* for modules over finite dimensional algebras, Proceedings of the 1997 International Symposium on Symbolic and Algebraic Computation (Kihei, HI) (New York), ACM, 1997, pp. 68–74 (electronic). MR MR1809971
- [4] David J. Green, Gröbner bases for p-group algebras, 2009.
- [5] Edward L. Green, Lenwood S. Heath, and Craig A. Struble, Constructing homomorphism spaces and endomorphism rings, J. Symbolic Comput. 32 (2001), no. 1-2, 101–117, Computer algebra and mechanized reasoning (St. Andrews, 2000). MR MR1840387 (2002g:16019)
- [6] Timo Hanke, The isomorphism problem for cyclic algebras and an application, ISSAC 2007, ACM, New York, 2007, pp. 181–186. MR MR2396201 (2009d:16026)
- [7] Gábor Ivanyos and Klaus Lux, Treating the exceptional cases of the MeatAxe, Experiment. Math. 9 (2000), no. 3, 373–381. MR MR1795309 (2001j:16067)
- [8] Graham Matthews, Computing Generators and Relations for Matrix Algebras, PhD Thesis, University of Georgia, 2004.
- [9] Gabriele Nebe and Allan Steel, Recognition of division algebras, J. Algebra 322 (2009), no. 3, 903–909.
- [10] Bernd Souvignier, Decomposing homogeneous modules of finite groups in characteristic zero, J. Algebra **322** (2009), no. 3, 948–956.
- [11] John Voight, Identifying the matrix ring: Algorithms for quaternion algebras and quadratic forms, 2010.

[12] Katsushi Waki, Calculation of direct summands of FG-modules, Sci. Rep. Hirosaki Univ. $\bf 44$ (1997), no. 2, 193–200. MR MR1619001 (99c:16006)