Linear Algebraic Groups
20Gxx

[1] Maximilian Albert and Annette Maier, *Additive polynomials for finite groups of Lie type*, 2009.

[2] Henrik Bäärnhielm, *Tensor decomposition of the Ree groups*, 2006.

[3] László Babai and Robert Beals, *A polynomial-time theory of black box groups. I*, Groups St. Andrews 1997 in Bath, I, London Math. Soc. Lecture Note Ser., vol. 260, Cambridge Univ. Press, Cambridge, 1999, pp. 30–64. MR MR1676609 (2000h:20089)

[4] Tatiana Bandman, Fritz Grunewald, Boris Kunyavskii, and Nathan Jones, *Geometry and arithmetic of verbal dynamical systems on simple groups*, Groups, Geometry, and Dynamics **4** (2010), no. 4, 607–655.

[5] C. Bates, D. Bundy, Sarah B. Perkins, and P. Rowley, *Commuting involution graphs in special linear groups*, Comm. Algebra **32** (2004), no. 11, 4179–4196. MR MR2102444 (2005g:20071)

[6] C. P. Bendel, D. K. Nakano, B. J. Parshall, and C. Pillen, *Cohomology for quantum groups via the geometry of the Nullcone*, 2007, pp. 1–58.

[7] Christopher P. Bendel, Daniel K. Nakano, and Cornelius Pillen, *Second cohomology groups for Frobenius kernels and related structures*, Adv. Math. **209** (2007), no. 1, 162–197. MR MR2294220 (2008c:20085)

[8] John N. Bray, Derek F. Holt, and Colva M. Roney-Dougal, *Certain classical groups are not well-defined*, J. Group Theory **12** (2009), no. 2, 171–180. MR MR2502211

[9] Peter A. Brooksbank, *Fast constructive recognition of black box symplectic groups*, J. Algebra **320** (2008), no. 2, 885–909. MR MR2422320

[10] Donald I. Cartwright, *Groups acting simply transitively on the vertices of a building of type A_n*, Groups of Lie Type and Their Geometries (Como, 1993), London Math. Soc. Lecture Note Ser., vol. 207, Cambridge Univ. Press, Cambridge, 1995, pp. 43–76. MR MR1320514 (96a:20039)

[11] Donald I. Cartwright, Anna Maria Mantero, Tim Steger, and Anna Zappa, *Groups acting simply transitively on the vertices of a building of type A_2. I*, Geom. Dedicata **47** (1993), no. 2, 143–166. MR MR1232965 (95b:20053)

[12] _____, *Groups acting simply transitively on the vertices of a building of type A_2. II. The cases $q = 2$ and $q = 3$*, Geom. Dedicata **47** (1993), no. 2, 167–223. MR MR1232966 (95b:20054)

[13] Tracey Cicco, *Algorithms for Computing Restricted Root Systems and Weyl Groups*, PhD Thesis, North Carolina State University, 2006.

[14] Arjeh M. Cohen and Scott H. Murray, *An algorithm for Lang's Theorem*, J. Algebra **322** (2009), no. 3, 675–702. MR MR2531217

[15] Marston Conder, Edmund Robertson, and Peter Williams, *Presentations for 3-dimensional special linear groups over integer rings*, Proc. Amer. Math. Soc. **115** (1992), no. 1, 19–26. MR MR1079696 (92h:20050)

[16] Antonio Cossidente and Sam K. J. Vereecke, *Some geometry of the isomorphism* $\mathrm{Sp}(4,q) \cong \mathrm{O}(5,q)$, *q even*, J. Geom. **70** (2001), no. 1-2, 28–37. MR MR1825542 (2002g:05043)

[17] Willem A. de Graaf and Andrea Pavan, *Constructing arithmetic subgroups of unipotent groups*, J. Algebra **322** (2009), no. 11, 3950–3970. MR MR2556132

[18] L. Di Martino, A. Previtali, and R. Radina, *Sets of transvections generating subgroups isomorphic to special linear groups*, Comm. Algebra **33** (2005), no. 6, 1663–1691. MR MR2150836 (2006c:20101)

[19] Claus Fieker and Willem A. de Graaf, *Finding integral linear dependencies of algebraic numbers and algebraic Lie algebras*, LMS J. Comput. Math. **10** (2007), 271–287 (electronic). MR MR2320832 (2008f:11119)

[20] D. L. Flannery and E. A. O'Brien, *Linear groups of small degree over finite fields*, Internat. J. Algebra Comput. **15** (2005), no. 3, 467–502. MR MR2151423 (2006m:20075)

[21] P. Fleischmann, W. Lempken, and A. E. Zalesskii, *Linear groups over* $\mathrm{GF}(2^k)$ *generated by a conjugacy class of a fixed point free element of order 3*, J. Algebra **244** (2001), no. 2, 631–663. MR MR1859042 (2002i:20069)

[22] Jason Fulman, *Random matrix theory over finite fields*, Bull. Amer. Math. Soc. (N.S.) **39** (2002), no. 1, 51–85 (electronic). MR MR1864086 (2002i:60012)

[23] Skip Garibaldi and Michael Carr, *Geometries, the principle of duality, and algebraic groups*, Expo. Math. **24** (2006), no. 3, 195–234. MR MR2250947

[24] Nikolai Gordeev, Fritz Grunewald, Boris Kunyavskii, and Eugene Plotkin, *A description of Baer-Suzuki type of the solvable radical of a finite group*, J. Pure Appl. Algebra **213** (2009), no. 2, 250–258. MR MR2467402 (2009i:20045)

[25] Neil A. Gordon, Trevor M. Jarvis, and Ron Shaw, *Aspects of the linear groups* $GL(n, 2)$, $n < 7$, J. Combin. Math. Combin. Comput. **53** (2005), 13–31. MR MR2137833 (2006b:20073)

[26] Neil A. Gordon, Guglielmo Lunardon, and Ron Shaw, *Linear sections of $GL(4, 2)$*, Bull. Belg. Math. Soc. Simon Stevin **5** (1998), no. 2-3, 287–311, Finite geometry and combinatorics (Deinze, 1997). MR MR1630033 (99g:51008)

[27] Jan E. Grabowski, *Examples of quantum cluster algebras associated to partial flag varieties*, J. Pure Appl. Algebra **To appear** (2010).

[28] Jan E. Grabowski and Stéphane Launois, *Quantum cluster algebra structures on quantum Grassmannians and their quantum Schubert cells: The finite-type cases*, Int.Math.Res. Not **To appear** (2010).

[29] Gerhard Grams, *Erzeugende und Relationen gewisser orthogonaler und symplektischer Gruppen über* GF(2), Mitt. Math. Sem. Giessen (1987), no. 183, 55–75. MR MR935088 (89c:20068)

[30] Robert L. Griess, Jr. and A. J. E. Ryba, *Embeddings of* SL(2, 27) *in complex exceptional algebraic groups*, Michigan Math. J. **50** (2002), no. 1, 89–99. MR MR1897035 (2003e:20052)

[31] Benedict H. Gross and Gabriele Nebe, *Globally maximal arithmetic groups*, J. Algebra **272** (2004), no. 2, 625–642. MR MR2028074 (2005b:20091)

[32] Robert Guralnick and Susan Montgomery, *Frobenius-Schur indicators for subgroups and the Drinfeld double of Weyl groups*, Trans. Amer. Math. Soc. **361** (2009), no. 7, 3611–3632. MR MR2491893

[33] Gerhard Hiss, *Hermitian function fields, classical unitals, and representations of 3-dimensional unitary groups*, Indag. Math. (N.S.) **15** (2004), no. 2, 223–243. MR MR2071863 (2005c:20080)

[34] R. B. Howlett, L. J. Rylands, and D. E. Taylor, *Matrix generators for exceptional groups of Lie type*, J. Symbolic Comput. **31** (2001), no. 4, 429–445. MR MR1823074 (2002c:20078)

[35] I. M. Isaacs and Dikran B. Karagueuzian, *Involutions and characters of upper triangular matrix groups*, Math. Comp. **74** (2005), no. 252, 2027–2033 (electronic). MR MR2164110

[36] William M. Kantor and Ákos Seress, *Black box classical groups*, Mem. Amer. Math. Soc. **149** (2001), no. 708, viii+168. MR MR1804385 (2001m:68066)

[37] _____, *Computing with matrix groups*, Groups, combinatorics & geometry (Durham, 2001), World Sci. Publishing, River Edge, NJ, 2003, pp. 123–137. MR MR1994963 (2004k:20098)

[38] P. H. Kropholler, S. Mohseni Rajaei, and J. Segal, *Invariant rings of orthogonal groups over $\mathbf{F_2}$*, Glasg. Math. J. **47** (2005), no. 1, 7–54. MR MR2200953 (2006i:13009)

[39] Larry Lambe and Bhama Srinivasan, *A computation of Green functions for some classical groups*, Comm. Algebra **18** (1990), no. 10, 3507–3545. MR MR1063992 (91i:20041)

[40] C. R. Leedham-Green and E. A. O'Brien, *Constructive recognition of classical groups in odd characteristic*, J. Algebra **322** (2009), no. 3, 833–881. MR MR2531225 (2010e:20075)

[41] Dimitri Leemans and Laurence Vauthier, *An atlas of abstract regular polytopes for small groups*, Aequationes Math. **72** (2006), no. 3, 313–320. MR MR2282877

[42] G. I. Lehrer, *The cohomology of the regular semisimple variety*, J. Algebra **199** (1998), no. 2, 666–689. MR MR1489931 (98k:20080)

[43] W. Lempken, *Constructing J_4 in* GL(1333, 11), Comm. Algebra **21** (1993), no. 12, 4311–4351. MR MR1242834 (94i:20032)

[44] Martin W. Liebeck and E. A. O'Brien, *Finding the characteristic of a group of Lie type*, J. Lond. Math. Soc. (2) **75** (2007), no. 3, 741–754. MR MR2352733 (2008i:20058)

[45] Alexander Lubotzky and Igor Pak, *The product replacement algorithm and Kazhdan's property (T)*, J. Amer. Math. Soc. **14** (2001), no. 2, 347–363 (electronic). MR MR1815215 (2003d:60012)

[46] Christopher Macmeikan, *Toral arrangements*, The COE Seminar on Mathematical Sciences 2004, Sem. Math. Sci., vol. 31, Keio Univ., Yokohama, 2004, pp. 37–54. MR MR2130506 (2005m:20116)

[47] Alice C. Niemeyer and Cheryl E. Praeger, *A recognition algorithm for non-generic classical groups over finite fields*, J. Austral. Math. Soc. Ser. A **67** (1999), no. 2, 223–253, Group theory. MR MR1717416 (2000i:20080)

[48] Wilhelm Plesken and Michael Pohst, *On maximal finite irreducible subgroups of* $\mathrm{GL}(n,\mathbf{Z})$. *I. The five and seven dimensional cases*, Math. Comp. **31** (1977), no. 138, 536–551. MR MR0444789 (56 #3137a)

[49] _____, *On maximal finite irreducible subgroups of* $\mathrm{GL}(n,\mathbf{Z})$. *II. The six dimensional case*, Math. Comp. **31** (1977), no. 138, 552–573. MR MR0444790 (56 #3137b)

[50] Cheryl E. Praeger, *Primitive prime divisor elements in finite classical groups*, Groups St. Andrews 1997 in Bath, II, London Math. Soc. Lecture Note Ser., vol. 261, Cambridge Univ. Press, Cambridge, 1999, pp. 605–623. MR MR1676657 (2000h:20090)

[51] L. J. Rylands and D. E. Taylor, *Matrix generators for the orthogonal groups*, J. Symbolic Comput. **25** (1998), no. 3, 351–360. MR MR1615330 (99d:20078)

[52] David I. Stewart, *The reductive subgroups of* G_2, J. Group Theory **13** (2010), no. 1, 117–130.

[53] Pham Huu Tiep and A. E. Zalesskii, *Some aspects of finite linear groups: a survey*, J. Math. Sci. (New York) **100** (2000), no. 1, 1893–1914, Algebra, 12. MR MR1774360 (2001f:20107)

[54] M. Vsemirnov, *Hurwitz groups of intermediate rank*, LMS J. Comput. Math. **7** (2004), 300–336 (electronic). MR MR2118177 (2005j:20058)

[55] M. A. Vsemirnov, *Is the group* $\mathrm{SL}(6,\mathbf{Z})$ (2,3)-*generated?*, Zap. Nauchn. Sem. S.-Peterburg. Otdel. Mat. Inst. Steklov. (POMI) **330** (2006), no. Vopr. Teor. Predst. Algebr. i Grupp. 13, 101–130, 272. MR MR2253569

[56] _____ , *On the* $(2,3)$*-generation of matrix groups over the ring of integers*, Algebra i Analiz **19** (2007), no. 6, 22–58. MR MR2411638

[57] Maxim Vsemirnov, *The group* $\mathrm{GL}(6, Z)$ *is* $(2,3)$*-generated*, J. Group Theory **10** (2007), no. 4, 425–430. MR MR2334749