

**PUBLICATIONS OF  
GEORGE LUSZTIG**

1. Model de geometrie afina plana peste un corp finit, *Studii Cerc. Mat.*, **17** (1965), 1337–1340.
2. Constructia fibrarilor universale peste poliedre arbitrare, *Studii Cerc. Mat.*, **18** (1965), 1215–1219.
3. (with H. Moscovici), Démonstration du théorème sur la suite spectrale d'un fibré au sens de Kan, *Proc. Camb. Phil. Soc.*, **64** (1968), 293–297.
4. Sur les complexes elliptiques fibrés, *C. R. Acad. Sci. Paris (A)*, **266** (1968), 914–917.
5. Sur les actions libres des groupes finis, *Bull. Acad. Polon. Sci.*, **16** (1968), 461–463.
6. Coomologia complexelor eliptice, *Studii Cerc. Mat.*, **21** (1969), 38–83.
7. A property of certain non-degenerate holomorphic vector fields, *An. Univ. Timisoara*, **7** (1969), 73–76.
8. (with J. Milnor and F. P. Peterson), Semicharacteristics and cobordism, *Topology*, **8** (1969), 357–359.
9. Remarks on the holomorphic Lefschetz formula, in “Analyse globale”, Presses de l’Univ. de Montréal (1969), 193–204.
10. (with J. Dupont), On manifolds satisfying  $w_1^2 = 0$ , *Topology*, **10** (1971), 81–92.
11. Novikov’s higher signature and families of elliptic operators, *J. Diff. Geom.*, **7** (1972), 229–256.
12. On the discrete series representations of the general linear groups over a finite field, *Bull. Amer. Math. Soc.*, **79** (1973), 550–554.
13. Introduction to elliptic operators, in “Global Analysis and applications”, Internat. Atomic Energy Agency, Vienna, 1974, 187–193.
14. (with R. W. Carter), On the modular representations of the general linear and symmetric groups, *Math. Z.*, **136** (1974), 193–242.
15. On the discrete series representations of the classical groups over a finite field, in “Proc. Int. Congr. Math., Vancouver 1974”, 465–470.
16. (with R. W. Carter), Modular representations of the general linear and symmetric groups, Proc. 2nd Int. Conf. Th. Groups 1973, LNM **372**, Springer Verlag (1974), 218–220.

17. Sur la conjecture de Macdonald, *C. R. Acad. Sci. Paris (A)*, **280** (1975), 371–320.
18. Divisibility of projective modules of finite Chevalley groups by the Steinberg module, *Bull. Lond. Math. Soc.*, **8** (1976), 130–134.
19. A note on counting nilpotent matrices, *Bull. Lond. Math. Soc.*, **8** (1976), 77–80.
20. (with R. W. Carter), Modular representations of finite groups of Lie type, *Proc. Lond. Math. Soc.*, **32** (1976), 347–384.
21. (with P. Deligne), Representations of reductive groups over finite fields, *Ann. Math.*, **103** (1976), 103–161.
22. On the finiteness of the number of unipotent classes, *Invent. Math.*, **34** (1976), 201–213.
23. Coxeter orbits and eigenspaces of Frobenius, *Invent. Math.*, **28** (1976), 101–159.
24. (with J. A. Green and G. I. Lehrer), On the degrees of certain group characters, *Quart. J. Math.*, **27** (1976), 1–4.
25. On the Green polynomials of classical groups, *Proc. Lond. Math. Soc.*, **33** (1976), 443–475.
26. (with B. Srinivasan), The characters of the finite unitary groups, *J. Algebra*, **49** (1977), 167–171.
27. Classification des représentations irréductibles des groupes classiques finis, *C. R. Acad. Sci. Paris (A)*, **284** (1977), 473–476.
28. Irreducible representations of finite classical groups, *Invent. Math.*, **43** (1977), 125–175.
29. Representations of finite Chevalley groups, Regional Conf. Series in Math. **39**, Amer. Math. Soc. (1978), 48 p.
30. (with W. M. Beynon), Some numerical results on the characters of exceptional Weyl groups, *Math. Proc. Camb. Phil. Soc.*, **84** (1978), 417–426.
31. Some remarks on the supercuspidal representations of  $p$ -adic semisimple groups, Proc. Symp. Pure Math. **33** (1), Amer. Math. Soc. (1979), 171–175.
32. On the reflection representation of a finite Chevalley group, in “Representation theory of Lie groups”, LMS Lect. Notes Ser. **34**, Cambridge U. Press (1979), 325–337.
33. Unipotent representations of a finite Chevalley group of type  $E_8$ ,

- Quart. J. Math.*, **30** (1979), 315–338.
34. (with N. Spaltenstein), Induced unipotent classes, *J. Lond. Math. Soc.*, **19** (1979), 41–52.
  35. A class of irreducible representations of a Weyl group, *Proc. Kon. Nederl. Akad. (A)*, **82** (1979), 323–335.
  36. (with D. Kazhdan), Representations of Coxeter groups and Hecke algebras, *Invent. Math.*, **53** (1979), 165–184.
  37. (with D. Kazhdan), Schubert varieties and Poincaré duality, *Proc. Symp. Pure Math.* **36**, Amer. Math. Soc. (1980), 185–203.
  38. Some problems in the representation theory of finite Chevalley groups, *Proc. Symp. Pure Math.* **37**, Amer. Math. Soc. (1980), 313–317.
  39. Hecke algebras and Jantzen’s generic decomposition patterns, *Adv. Math.*, **37** (1980), 121–164.
  40. On the unipotent characters of the exceptional groups over finite fields, *Invent. Math.*, **60** (1980), 173–192.
  41. (with D. Kazhdan), A topological approach to Springer’s representations, *Adv. Math.*, **38** (1980), 222–228.
  42. On a theorem of Benson and Curtis, *J. Algebra*, **71** (1981), 490–498.
  43. Green polynomials and singularities of unipotent classes, *Adv. Math.*, **42** (1981), 169–178.
  44. Unipotent characters of the symplectic and odd orthogonal groups over a finite field, *Invent. Math.*, **64** (1981), 263–296.
  45. Unipotent characters of the even orthogonal groups over a finite field, *Trans. Amer. Math. Soc.*, **272** (1982), 733–751.
  46. (with P. Deligne), Duality for representations of a reductive group over a finite field, *J. Algebra*, **74** (1982), 284–291.
  47. (with D. Alvis), On Springer’s correspondence for simple groups of type  $E_n$  ( $n = 6, 7, 8$ ), *Math. Proc. Camb. Phil. Soc.*, **92** (1982), 65–72.
  48. (with D. Alvis), The representations and generic degrees of the Hecke algebras of type  $H_4$ , *J. für reine und angew. math.*, **336** (1982), 201–212; Erratum, **449** (1994), 217–218.
  49. A class of irreducible representations of a Weyl group II, *Proc. Kon. Nederl. Akad. (A)*, **85** (1982), 219–226.
  50. (with D. Vogan), Singularities of closures of  $K$ -orbits on a flag manifold, *Invent. Math.*, **71** (1983), 365–379.
  51. (with P. Deligne), Duality for representations of a reductive group over

- a finite field II, *J. Algebra*, **81** (1983), 540–549.
52. Singularities, character formulas and a  $q$ -analog of weight multiplicities, *Astérisque*, **101–102** (1983), 208–229.
  53. Some examples of square integrable representations of semisimple  $p$ -adic groups, *Trans. Amer. Math. Soc.*, **227** (1983), 623–653.
  54. Left cells in Weyl groups, in “Lie groups representations”, LNM **1024**, Springer Verlag (1983), 99–111.
  55. Characters of reductive groups over a finite field, in “Proc. Int. Congr. Math., Warsaw 1983”, 877–880.
  56. Open problems in algebraic groups, Proc. 12th Int. Symp., Taniguchi Foundation, Katata, 1983, p. 14.
  57. Intersection cohomology complexes on a reductive group, *Invent. Math.*, **75** (1984), 205–272.
  58. Cells in affine Weyl groups, in “Algebraic groups and related topics”, Adv. Stud. Pure Math. **6**, North-Holland and Kinokuniya (1985), 255–287.
  59. (with N. Spaltenstein), On the generalized Springer correspondence for classical groups, in “Algebraic groups and related topics”, Adv. Stud. Pure Math. **6**, North-Holland and Kinokuniya (1985), 289–316.
  60. The two sided cells of the affine Weyl group of type A, in “Infinite dimensional groups with applications”, MSRI Publ. **4**, Springer Verlag (1985), 275–283.
  61. Character sheaves I, *Adv. Math.*, **56** (1985), 193–237.
  62. Character sheaves II, *Adv. Math.*, **57** (1985), 226–265.
  63. Character sheaves III, *Adv. Math.*, **57** (1985), 266–315.
  64. Equivariant  $K$ -theory and representations of Hecke algebras, *Proc. Amer. Math. Soc.*, **94** (1985), 337–342.
  65. (with D. Kazhdan), Equivariant  $K$ -theory and representations of Hecke algebras II, *Invent. Math.*, **80** (1985), 209–231.
  66. Character sheaves IV, *Adv. Math.*, **59** (1986), 1–63.
  67. Character sheaves V, *Adv. Math.*, **61** (1986), 103–155.
  68. Sur les cellules gauches des groupes de Weyl, *C. R. Acad. Sci. Paris (A)*, **302** (1986), 5–8.
  69. On the character values of finite Chevalley groups at unipotent elements, *J. Algebra*, **104** (1986), 146–194.
  70. (with D. Kazhdan), Proof of the Deligne-Langlands conjecture for

- Hecke algebras, *Invent. Math.*, **87** (1987), 153–215.
71. Cells in affine Weyl groups II, *J. Algebra*, **109** (1987), 536–548.
  72. Fourier transforms on a semisimple Lie algebra over  $F_q$ , in “Algebraic Groups-Utrecht 1986”, LNM **1271**, Springer Verlag (1987), 177–188.
  73. Cells in affine Weyl groups III, *J. Fac. Sci. Tokyo U. (IA)*, **34** (1987), 223–243.
  74. Introduction to character sheaves, Proc. Symp. Pure Math. **47** (1), Amer. Math. Soc. (1987), 165–180.
  75. Leading coefficients of character values of Hecke algebras, Proc. Symp. Pure Math. **47** (2), Amer. Math. Soc. (1987), 235–262.
  76. (with C. De Concini and C. Procesi), Homology of the zero set of a nilpotent vector field on a flag manifold, *J. Amer. Math. Soc.*, **1** (1988), 15–34.
  77. Quantum deformations of certain simple modules over enveloping algebras, *Adv. Math.*, **70** (1988), 237–249.
  78. (with D. Kazhdan), Fixed point varieties on affine flag manifolds, *Isr. J. Math.*, **62** (1988), 129–168.
  79. Cuspidal local systems and graded Hecke algebras I, *Publ. Math. I.H.E.S.*, **67** (1988), 145–202.
  80. (with X. Nanhua), Canonical left cells in affine Weyl groups, *Adv. Math.*, **72** (1988), 284–288.
  81. On representations of reductive groups with disconnected center, *Astérisque*, **168** (1988), 157–166.
  82. Modular representations and quantum groups, *Contemp. Math.*, **82** (1989), 59–77.
  83. Affine Hecke algebras and their graded version, *J. Amer. Math. Soc.*, **2** (1989), 599–635.
  84. Cells in affine Weyl groups IV, *J. Fac. Sci. Tokyo U. (IA)*, **36** (1989), 297–328.
  85. Representations of affine Hecke algebras, *Astérisque*, **171–172** (1989), 73–84.
  86. Finite dimensional Hopf algebras arising from quantized universal enveloping algebras, *J. Amer. Math. Soc.*, **3** (1990), 257–296.
  87. Green functions and character sheaves, *Ann. Math.*, **131** (1990), 355–408.
  88. Canonical bases arising from quantized enveloping algebras, *J. Amer.*

- Math. Soc.*, **3** (1990), 447–498.
89. On quantum groups, *J. Algebra*, **131** (1990), 466–475.
  90. Quantum groups at roots of 1, *Geom. Ded.*, **35** (1990), 89–114.
  91. (with A. A. Beilinson and R. MacPherson), A geometric setting for the quantum deformation of  $GL_n$ , *Duke Math. J.*, **61** (1990), 655–677.
  92. Symmetric spaces over a finite field, in “The Grothendieck Festschrift III”, *Progr. in Math.* **88**, Birkhäuser, Boston (1990), 57–81.
  93. Canonical bases arising from quantized enveloping algebras II, in “Common trends in mathematics and quantum field theories” (T. Eguchi et al., eds.), *Progr. of Theor. Phys. Suppl.* **102** (1990), 175–201.
  94. (with D. Kazhdan), Affine Lie algebras and quantum groups, *Int. Math. Res. Notices* (1991), 21–29.
  95. Quivers, perverse sheaves and enveloping algebras, *J. Amer. Math. Soc.*, **4** (1991), 365–421.
  96. (with J. M. Smelt), Fixed point varieties in the space of lattices, *Bull. Lond. Math. Soc.*, **23** (1991), 213–218.
  97. Intersection cohomology methods in representation theory, in “Proc. Int. Congr. Math., Kyoto 1990”, Springer Verlag (1991), 155–174.
  98. A unipotent support for irreducible representations, *Adv. Math.*, **94** (1992), 139–179.
  99. Canonical bases in tensor products, *Proc. Nat. Acad. Sci.*, **89** (1992), 8177–8179.
  100. Remarks on computing irreducible characters, *J. Amer. Math. Soc.*, **5** (1992), 971–986.
  101. Introduction to quantized enveloping algebras, in *Progr. in Math.* **105**, Birkhäuser, Boston (1992), 49–65.
  102. Affine quivers and canonical bases, *Publ. Math. I.H.E.S.*, **76** (1992), 111–163.
  103. (with J. Tits), The inverse of a Cartan matrix, *An. Univ. Timisoara*, **30** (1992), 17–23.
  104. (with I. Grojnowski), On bases of irreducible representations of quantum  $GL_n$ , in “Kazhdan-Lusztig theory and related topics”, *Contemp. Math.* **139** (1992), 167–174.
  105. (with D. Kazhdan), Tensor structures arising from affine Lie algebras I, *J. Amer. Math. Soc.*, **6** (1993), 905–947.

106. (with D. Kazhdan), Tensor structures arising from affine Lie algebras II, *J. Amer. Math. Soc.*, **6** (1993), 949–1011.
107. Coxeter groups and unipotent representations, *Astérisque*, **212** (1993), 191–203.
108. (with I. Grojnowski), A comparison of bases of quantized enveloping algebras, in “Linear algebraic groups and their representations”, *Contemp. Math.* **153** (1993), 11–19.
109. Tight monomials in quantized enveloping algebras, in “Quantum deformations of algebras and their representations” (A. Joseph et al., eds.), *Isr. Math. Conf. Proc.* **7**, Amer. Math. Soc. (1993), 117–132.
110. Exotic Fourier transform, *Duke Math. J.*, **73** (1994), 227–241.
111. Vanishing properties of cuspidal local systems, *Proc. Nat. Acad. Sci.*, **91** (1994), 1438–1439.
112. (with D. Kazhdan), Tensor structures arising from affine Lie algebras III, *J. Amer. Math. Soc.*, **7** (1994), 335–381.
113. (with D. Kazhdan), Tensor structures arising from affine Lie algebras IV, *J. Amer. Math. Soc.*, **7** (1994), 383–453.
114. Monodromic systems on affine flag manifolds, *Proc. Roy. Soc. Lond. (A)*, **445** (1994), 231–246; Errata, **450** (1995), 731–732.
115. Problems on canonical bases, in “Algebraic groups and their generalizations: quantum and infinite dimensional methods”, *Proc. Symp. Pure Math.* **56** (2), Amer. Math. Soc. (1994), 169–176.
116. Total positivity in reductive groups, in “Lie theory and geometry”, *Progr. in Math.* **123**, Birkhäuser, Boston (1994), 531–568.
117. Study of perverse sheaves arising from graded Lie algebras, *Adv. Math.*, **112** (1995), 147–217.
118. Cuspidal local systems and graded Hecke algebras II, in “Representations of groups” (B. Allison et al., eds.), *Canad. Math. Soc. Conf. Proc.* **16**, Amer. Math. Soc. (1995), 217–275.
119. Quantum groups at  $v = \infty$ , in “Functional analysis on the eve of the 21st century”, vol. I, *Progr. in Math.* **131**, Birkhäuser, Boston (1995), 199–221.
120. Classification of unipotent representations of simple  $p$ -adic groups, *Int. Math. Res. Notices* (1995), 517–589.
121. An algebraic-geometric parametrization of the canonical basis, *Adv. Math.*, **120** (1996), 173–190.

122. Affine Weyl groups and conjugacy classes in Weyl groups, *Transform. Groups*, **1** (1996), 83–97.
123. Braid group actions and canonical bases, *Adv. Math.*, **122** (1996), 237–261.
124. Non local finiteness of a  $W$ -graph, *Represent. Th.*, **1** (1997), 25–30 (electronic).
125. Hermitian representations and cohomology of Lie groups, *Represent. Th.*, **1** (1997), 31–36 (electronic).
126. (with C. K. Fan), Factorization of certain exponentials in Lie groups, in “Algebraic groups and Lie groups” (G. I. Lehrer, ed.), Cambridge U. Press (1997), 215–218.
127. Total positivity and canonical bases, in “Algebraic groups and Lie groups” (G. I. Lehrer, ed.), Cambridge U. Press (1997), 281–295.
128. Notes on unipotent classes, *Asian J. Math.*, **1** (1997), 194–207.
129. Cells in affine Weyl groups and tensor categories, *Adv. Math.*, **129** (1997), 85–98.
130. Periodic  $W$ -graphs, *Represent. Th.*, **1** (1997), 207–279 (electronic).
131. A comparison of two graphs, *Int. Math. Res. Notices* (1997), 639–640.
132. Constructible functions on the Steinberg variety, *Adv. Math.*, **130** (1997), 287–310.
133. Total positivity in partial flag manifolds, *Represent. Th.*, **2** (1998), 70–78 (electronic).
134. Introduction to total positivity, in “Positivity in Lie theory: open problems” (J. Hilgert et al., eds.), de Gruyter (1998), 133–145.
135. On quiver varieties, *Adv. Math.*, **136** (1998), 141–182.
136. Canonical bases and Hall algebras, in “Representation Theories and Algebraic Geometry” (A. Broer et al., eds.), Kluwer Acad. Publ. (1998), 365–399.
137. Bases in equivariant  $K$ -theory, *Represent. Th.*, **2** (1998), 298–369 (electronic).
138. Homology bases arising from reductive groups over a finite field, in “Algebraic groups and their representations” (R. W. Carter et al., eds.), Kluwer Acad. Publ. (1998), 53–72.
139. Aperiodicity in quantum affine  $\mathfrak{gl}_n$ , *Asian J. Math.*, **3** (1999), 147–178.
140. Bases in equivariant  $K$ -theory II, *Represent. Th.*, **3** (1999), 281–353 (electronic).



141. A survey of group representations, *Nieuw Archief voor Wiskunde*, **17** (1999), 483–489.
142. Subregular nilpotent elements and bases in  $K$ -theory, *Canad. J. Math.*, **51** (1999), 1194–1225.
143. Recollections about my teacher, Michael Atiyah, *Asian J. Math.*, **3** (1999), v–vi.
144. Semicanonical bases arising from enveloping algebras, *Adv. Math.*, **151** (2000), 129–139.
145. Fermionic form and Betti numbers, [QA/0005010](#).
146. Quiver varieties and Weyl group actions, *Ann. Inst. Fourier*, **50** (2000), 461–489.
147.  $G(F_q)$ -invariants in irreducible  $G(F_{q^2})$ -modules, *Represent. Th.*, **4** (2000), 448–465 (electronic).
148. Remarks on quiver varieties, *Duke Math. J.*, **105** (2000), 239–265.
149. Transfer maps for quantum affine  $\mathfrak{sl}_n$ , in “Representations and quantizations” (J. Wang et al., eds.), China Higher Education Press and Springer Verlag (2000), 341–356.
150. Representation theory in characteristic  $p$ , in “Taniguchi Conf. on Math., Nara '98”, *Adv. Stud. Pure Math.* **31**, Math. Soc. Japan (2001), 167–178.
151. Cuspidal local systems and graded Hecke algebras III, *Represent. Th.*, **6** (2002), 202–242 (electronic).
152. Classification of unipotent representations of simple  $p$ -adic groups II, *Represent. Th.*, **6** (2002), 243–289 (electronic).
153. Constructible functions on varieties attached to quivers, in “Studies in memory of I. Schur”, *Progress in Math.* **210**, Birkhäuser, Boston (2002), 177–223.
154. Rationality properties of unipotent representations, *J. Algebra*, **258** (2002), 1–22.
155. Notes on affine Hecke algebras, in “Iwahori-Hecke algebras and their representation theory” (M. W. Baldoni et al., eds.), *LNMA* **1804**, Springer Verlag (2002), 71–103.
156. Homomorphisms of the alternating group  $A_5$  into reductive groups, *J. Algebra*, **260** (2003), 298–322.
157. Character sheaves on disconnected groups I, *Represent. Th.*, **7** (2003), 374–403 (electronic); *Errata*, **8** (2004), 179.

158. Representations of reductive groups over finite rings, *Represent. Th.*, **8** (2004), 1–14 (electronic).
159. Character sheaves on disconnected groups II, *Represent. Th.*, **8** (2004), 72–124 (electronic).
160. Character sheaves on disconnected groups III, *Represent. Th.*, **8** (2004), 125–144 (electronic).
161. Character sheaves on disconnected groups IV, *Represent. Th.*, **8** (2004), 145–178 (electronic).
162. Parabolic character sheaves I, *Mosc. Math. J.*, **4** (2004), 153–179.
163. An induction theorem for Springer’s representations, in “Representation theory of Algebraic Groups and Quantum Groups”, Adv. Stud. Pure Math. **40**, Math. Soc. Japan, Kinokuniya (2004), 253–259.
164. Character sheaves on disconnected groups V, *Represent. Th.*, **8** (2004), 346–376 (electronic).
165. Character sheaves on disconnected groups VI, *Represent. Th.*, **8** (2004), 377–413 (electronic).
166. Parabolic character sheaves II, *Mosc. Math. J.*, **4** (2004), 869–896.
167. Convolution of almost characters, *Asian J. Math.*, **8** (2004), 769–772.
168. Character sheaves on disconnected groups VII, *Represent. Th.*, **9** (2005), 209–266 (electronic).
169. Unipotent elements in small characteristic, *Transform. Groups*, **10** (2005), 449–487.
170. Character sheaves and generalizations, in “The unity of mathematics” (P. Etingof et al., eds.), Progress in Math. **244**, Birkhäuser, Boston (2006), 443–455.
171. A  $q$ -analogue of an identity of N. Wallach, in “Studies in Lie Theory” (J. Bernstein et al., eds.), Progress in Math. **243**, Birkhäuser, Boston (2006), 405–410.
172. Character sheaves on disconnected groups VIII, (Revised January 19, 2006), RT/0509356, submitted.
173. (with X. He), Singular supports for character sheaves on a group compactification, RT/0511050, submitted.
174. Character sheaves on disconnected groups IX, RT/0601504, submitted.
175. Graded Lie algebras and intersection cohomology, (Revised May 11, 2006), RT/0604535.

**BOOKS**

- B1. The discrete series of  $GL_n$  over a finite field, Ann. Math. Studies **81**, Princeton U. Press, 1974, 99 p.
- B2. Characters of reductive groups over a finite field, Ann. Math. Studies **107**, Princeton U. Press, 1984, 384 p.
- B3. Introduction to quantum groups, Progr. in Math. **110**, Birkhäuser, Boston, 1993, 341 p.
- B4. Hecke algebras with unequal parameters, CRM Monographs Ser. **18**, Amer. Math. Soc., 2003, 136 p.