

Joseph BERNSTEIN

LIST OF PUBLICATIONS

1. J. Bernstein
On sets covered up by segments
Doklady Akad. Nauk (Soviet Mathematics – Doklady) 146, No.1, 11-13 (1962).
2. J. Bernstein
On the dimension of commutative sub-rings of $R(n, k)$.
Functional Analysis and its Applications 1, No.4, 79-81 (1967).[PDF](#)
3. J. Bernstein
Meromorphic continuation of function f^λ for some polynomials f .
Functional Analysis and its Applications, No.1, 92-93 (1968).[PDF](#)
4. J. Bernstein, S.I. Gelfand
Meromorphic continuation of the function P^λ .
Functional Analysis and its Applications 3, No.1, 84-85 (1969).[PDF](#)
5. J. Bernstein, D. Kazhdan
On 1-dimensional cohomologies of discrete subgroups.
Functional Analysis and its Applications 4, No.1, 1-5 (1970).[PDF](#)
6. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Differential operators on the principal affine space.
Doklady Akad. Nauk 195, No.6, 1255-1258 (1970).
7. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Structure of representations generated by highest weight vectors.
Functional Analysis and its Applications 5, No.1, 1-9 (1971).[PDF](#)
8. J. Bernstein
Modules over the ring of differential operators; the study of
fundamental solutions of equations with constant coefficients.
Functional Analysis and its Applications 5, No.2, 1-16 (1972).[PDF](#)
9. J. Bernstein
Analytic continuation of distributions with respect to a parameter.
Functional Analysis and its Applications 6, No.4, 26-40 (1972).[PDF](#)
10. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Differential operators on the cubic cone.
Uspekhi Mat. Nauk (Soviet Mathematics – Surveys) 37, No.1, 185-190 (1972).[PDF](#)
11. J. Bernstein, B.I. Rosenfeld
On characteristic classes of foliations.
Functional Analysis and its Applications 6, No.1, 68-69 (1972).[PDF](#)
12. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Schubert cells and cohomologies of flag manifolds.
Functional Analysis and its Applications 7, No.1, 64-65 (1973).[PDF](#)
13. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Schubert cells and cohomologies of spaces G/P .
Uspekhi Mat. Nauk 38, No.3, 3-26(1973).[PDF](#)

14. J. Bernstein, I.M. Gelfand, V.A. Ponomarev
Coxeter functors and Gabriel's theorem.
Uspekhi Mat. Nauk 38, No.2, 19-33(1973).[PDF](#)
15. J. Bernstein, B.I. Rozenfeld
Homogeneous spaces for infinite dimensional
Lie algebras and characteristic classes of foliations.
Uspekhi Mat. Nauk 28, No.4, 103-138 (1973).[PDF](#)
16. G.M. Adel'son-Velski, J. Bernstein, M.L. Gerver
Estimation of the number of actions for the partial determination of an order of
a finite set of numbers.
Studies in Discrete Mathematics, Izdat "Nauka", Moscow, 184-188 (1973) (In Rus-
sian)
17. J. Bernstein
All reductive p -adic groups are tame.
Functional Analysis and its Applications 8, No.2, 3-6 (1974).[PDF](#)
18. J. Bernstein, I.M. Gelfand, S.I. Gelfand
A new model for the representations of finite semisimple algebraic groups
Uspekhi. Mat. Nauk 29, No. 3, 185-186 (1974).
19. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Models of representations of compact Lie groups
Functional Analysis and its Applications 9, No.4, 61-62 (1975).[PDF](#)
20. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Differential operators on principal affine space and study of g -modules.
In "Lie groups and their representations" (I.M.Gelfand ed)
Akademiai Kiado, Budapest 21-64 (1975).
21. J. Bernstein, I.M. Gelfand, S.I. Gelfand
On some category of g -modules.
Functional Analysis and its Applications 10, No.2, 1-8 (1976).[PDF](#)
22. J. Bernstein, A.V. Zelevinsky
Representations of the group $GL(n, F)$, where F is a local non-Archimedean field.
Uspekhi Mat. Nauk 10, No.3, 5-70 (1976).[PDF](#)
23. J. Bernstein, A.V. Zelevinsky
Induced representations of $GL(n)$ over p -adic field.
Functional Analysis and its Applications 10, No.3, 74-75 (1976).[PDF](#)
24. J. Bernstein, M.L. Gerver
A problem of integral geometry for a family of geodesics and an inverse kinematics
seismics problem
Doklad. Akad. Nauk, SSSR, No. 2, 302-305 (1976).
25. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Models of representations of Lie groups.
Trudy Sem. Petrovsk 2, 3-21 (1976) (also: Selecta Math. Soviet, 1, No. 2, (1981)).
26. J. Bernstein, A.V. Zelevinsky
Induced representations of reductive p -adic groups. I.
Ann. Scient. Ec. Norm. Sup. 10, No.4, 441-472 (1977).[PDF](#)

27. J. Bernstein, D.A. Leites
Integral forms and Stokes formula on supermanifolds.
Functional Analysis and its Applications 11, No.1, 55-56 (1977).
28. J. Bernstein, D.A. Leites
How to integrate differential forms on supermanifolds.
Functional Analysis and its Applications 11, No.3, 70-71 (1977).
29. J. Bernstein, D.N. Bernstein, V.K. Dubrovich
On relict recombination lines.
Astronomical Journal 54, No.4 (1977).
30. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Local structure of the category of Harish-Chandra modules.
C.R.Acad. Sci. 286, No. 10, A435-A437 (1978).
31. J. Bernstein, I.M. Gelfand, S.I. Gelfand
Algebraic bundles on P^n and problems of linear algebra.
Functional Analysis and its Applications 12, No.3, 66-67 (1978).[PDF](#)
32. J. Bernstein, O.V. Shvartsman
Chevalley theorem for complex cristallographic Coxeter groups.
Functional Analysis and its Applications 12, No.4, 79-80 (1978).[PDF](#)
33. J. Bernstein, D.A. Leites
The characters formula for irreducible finite dimensional representations of Lie superalgebra $GL(n, 1)$ and $SL(n, 1)$.
Comp. Rendues de l'Acad. Bulgare 33, No.8, 277-278 (1980).
34. J. Bernstein, S.I. Gelfand
Tensor products of finite and infinite dimensional representations of semisimple Lie algebras.
Comp. Mathematica 41, No.2, 245-285 (1980).[PDF](#)
35. J. Bernstein, V.F. Shvartsman
On relation between the size of the Universe and its curvature.
JETP 78, No.11, 1617-1628 (1980).
36. J. Bernstein, A. Beilinson
Localization de D -modules.
Comp. Rend. Acad. Sci. Paris t.292, 15-18 (1981).
37. J. Bernstein, D.A. Leites
Invariant differential operators and irreducible representations of Lie superalgebras of vector fields.
Serdica 7, No. 4, 320-334 (1981) (Selecta Math. Soviet 1, No. 2, 143-160 (1981)).
38. J. Bernstein, D.A. Leites
The superalgebra $Q(n)$, the odd trace and the odd determinant.
C.R. Acad. Bulgare. 35, No. 3, 285-286 (1982).
39. J. Bernstein, A. Beilinson
A generalization of Casselman's submodule theorem.
In Proceedings of the conference "Representations of reductive Lie groups",
Park City, UTAH, April (1982),
Progr. Math. 40,35-52,Birkh"auzer,Boston,Mass (1983)

40. J. Bernstein, D.A. Leites
Irreducible representations of finite-dimensional Lie superalgebras of type W .
Selecta Math. Soviet 3, No. 1, 63-68 (1983/84).
41. J. Bernstein, A.A. Beilinson, P. Deligne
Faisceaux pervers.
Astérisque 100, 3-171 (1983).
42. J. Bernstein
 P -invariant distributions on $GL(n)$ and the classification of unitary representations
of $GL(n)$ (non-Archimedean case).
Springer Lecture Notes in Math. 943, 50-102 (1984).[PDF](#)
43. J. Bernstein, P. Deligne
Le "centre" de Bernstein,
In "Représentations des groupes réductifs sur un corps local,
Travaux en cours" (P.Deligne ed.), Hermann, Paris, 1-32 (1984)
44. J. Bernstein, P. Deligne, D. Kazhdan
Trace Paley Wiener theorem for reductive p -adic groups.
Jour. d'Analyse Math. 47, 180-192 (1986).[PDF](#)
45. J. Bernstein, V. Lunts
On non-holonomic irreducible D -modules.
Invent. Math. 94, 223-243 (1988).
46. J. Bernstein
On the support of Plancherel measure.
Jour. of Geom. and Physics 5, No.4 (1988).[PDF](#)
47. J. Bernstein
Trace in categories.
In the book "Operator algebras, Unitary representations, Enveloping algebras and
Invariant theory ", May 1989,
Prog.Math.92,417-424,Birkhäuser, Boston(1990)
48. J. Bernstein,
Representations of p -adic groups
Lectures by Joseph Bernstein. Written by Karl E. Rumelhart.
Harvard University. (Fall 1992).[PDF](#)
49. J. Bernstein, A.A. Beilinson
A proof of the Jantzen conjectures.
Advances in Soviet Mathematics 16:1, 1-50 (1993) Issue in honor of I.M.Gelfand.
50. J. Bernstein, V. Lunts
Equivariant sheaves and functors.
Lecture Notes in Mathematics, v.1578 (1994), 1-139. [1](#) [2](#) [3](#) [4](#) [5](#) [6](#)
51. J. Bernstein, V. Lunts
Localization for derived categories of (\mathfrak{g}, K) -modules
Jour. Amer. Math. Society, v.8 , no.4 (1995), 819-856[PDF](#)
52. J. Bernstein, T. Khovanova
On the Quantum Group $SL_q(2)$
Comm. in Math. Physics, v.177 (1996), 691-708[PDF](#)

53. J. Bernstein, V. Lunts
A simple proof of Kostant's theorem that $U(\mathfrak{g})$ is free over its center.
Amer. Jour. Math. v.118, no.5 (1996), 979-987 [PDF](#)
54. J. Bernstein, A. Braverman, D. Gaitsgory
The Cohen-Macaulay property of the category of (\mathfrak{g}, K) -modules
Selecta Mathematica, New Ser. v.3 (1997), 303-314 [PDF](#)
55. J. Bernstein and A. Reznikov
Sobolev norms of automorphic functionals and Fourier coefficients of cusp forms,
Comptes Rendues Acad. Sci. Paris, t.327, 1998 Ser.1, p.111-116, [PDF](#)
56. J. Bernstein
Analytic structures on representation spaces of reductive groups
Documenta Mathematica, Proceedings of the ICM, Berlin 1998, v. 2, 519-525 [PDF](#)
57. J. Bernstein and A. Reznikov
Analytic continuation of representations and estimates of automorphic forms,
Annals of Mathematics. 150 (1999), 329-352 [PDF](#)
58. J. Bernstein, I. Frenkel, M. Khovanov.
A categorification of the Temperley-Lieb algebra and Schur quotients of $U(\mathfrak{sl}_2)$ via
projective and Zuckerman functors,
Selecta Math (N.S.) 5 (1999), no. 2, 199-241 [PDF](#)
59. J. Bernstein, A. Reznikov
Sobolev norms of automorphic functionals,
Internat. Math. Res. Notices, 2002:40, 2155-2174 (2002) [PDF](#)
60. J. Bernstein, S. Gindikin,
Notes on Integral Geometry for Manifolds of Curves,
American Mathematical Society Translations, Vol.210, 57-79, (2003)
61. J. Bernstein, A. Reznikov,
Estimates of Automorphic Functions,
Moscow Mathematical Journal - v.4(2004), no.2, 19-37 [PDF](#)
62. S. Alesker, J. Bernstein
Range characterization of the cosine transform on higher Grassmannians,
Advances in Mathematics - Adv. Math. 184(2004), no.2, 367-379. [PDF](#)
63. J. Bernstein, A. Reznikov
Periods, Subconvexity of L-functions and Representation Theory,
Journal of Differential Geometry - v.70, no.1 (May 2005), 129-142 [PDF](#)
64. J. Bernstein, O. Schwarzman
Complex crystallographic Coxeter groups and affine root systems. J. Nonlinear
Math. Phys. 13 (2006), no. 2, 163-182. [PDF](#)
65. J. Bernstein, O. Schwarzman
Chevalley's theorem for the complex crystallographic groups. J. Nonlinear Math.
Phys. 13 (2006), no. 3, 323-351. [PDF](#)