

Robert D. MacPherson

BIBLIOGRAPHY

- [1] Fourier Analysis of Uniform Random Number Generators, with R. R. Coveyou, *J. Assoc. Comp. Mach.* 14 (1967), 100–119.
- [2] Singularities of Vector Bundle Maps, *Proceedings of Liverpool Singularities Symposium I*, Springer Lect. Notes in Math. (1971), 316–318.
- [3] Generic Vector Bundle Maps, *Dynamical Systems*, M. Peixoto, ed., Academic Press, 1973, 165–327.
- [4] Characteristic Classes for Singular Varieties, *Publicado nas Atlas do Coloquio Brasileiro de Matematica*, 1973, 321–327.
- [5] Chern Classes for Singular Algebraic Varieties, *Annals of Math* 100 (1974), 423–432.
- [6] Les Classes Caractéristiques et le Théorème de Riemann-Roch pour les Variétés Singulières, *Seminaire P. Dubreil (Algèbre)*, 28e année 1974/75, no. 1.
- [7] Riemann-Roch for Singular Varieties, with P. Baum and W. Fulton, *Publ. Math. de l’Institut des Hautes Etudes Scientifiques* no. 45 (1976), 101–145.
- [8] Intersecting Cycles on an Algebraic Variety, with W. Fulton, *Real and Complex Singularities*, Oslo 1976, Sijthoff and Noordoff, 179–197.
- [9] Lecture Notes on Catastrophe Theory, *Institute for Energy Analysis Occasional Paper IEA(0)*, 76–1, 1976.
- [10] La Dualité de Poincaré pour les Espaces Singulières, with M. Goresky, *Comptes Rendus de l’Acad. des Sci. Paris* 284 (1977), 1549–51.
- [11] Defining Algebraic Intersections, with W. Fulton, *Tromso Conference on Algebraic Geometry*, Springer-Verlag, *Lect. Notes in Math.* 687 (1978), 1–30.
- [12] The Combinatorial Formula of Gabrielov, Gelfand, and Losik for the First Pontrjagin Class, *Seminaire Bourbaki No. 497*, 1977, *Springer Lect. Notes in Math.* 677 (1978), 88–104.
- [13] Riemann-Roch and Topological K -theory for Singular Varieties, with P. Baum and W. Fulton, *Acta Mathematica* 143 (1979), 155–192.
- [14] Intersection Homology Theory, with M. Goresky, *Topology* 49 (1980), 135–162.
- [15] *Categorical Framework for the Study of Singular Spaces*, with W. Fulton, *Memoirs A.M.S.*, No. 243 (1981), trans. into Russian by Mir Press, Moscow.
- [16] Représentations des Groupes de Weyl et Homologie d’Intersection pour les Variétés Nilpotents, with W. Borho, *Comptes Rendus Acad. Sci. Paris* 292 (1981), 51.
- [17] Geometry in Grassmannians and a Generalization of the Dilogarithm, with I. M. Gelfand, *Advances in Math.* 44, no. (3) (1982), 279–312.

- [18] L^2 cohomology and Intersection Homology of Algebraic Varieties, with J. Cheeger and M. Goresky, Ann. of Math. study: I.A.S. Seminar on Differential Geometry, 1982, 303–340.
- [19] On the Topology of Algebraic Maps, with M. Goresky, Proc. of LaRabida Conference on Algebraic Geometry, 1981, Springer Lect. Notes in Math. 961 (1982), 119–129.
- [20] Intersection Homology II, with M. Goresky, Inventiones Math. 71 (1983), 77–129.
- [21] Stratified Morse theory, with M. Goresky, Proc. A.M.S. Symp. in Singularities, Vol. 40 (1983), 517–534.
- [22] Schubert Cells and Verma Modules: a Dictionary, with S. I. Gelfand, Seminaire d’Algèbre, Springer Lect. Notes in Math. 924 (1983), 1–49.
- [23] Morse Theory and Intersection Homology, Astérisque 101-102 (1983), 135–192.
- [24] Partial Resolutions of Nilpotent Varieties, with W. Borho, Astérisque 101-102 (1983), 23–74.
- [25] About the Enumeration of Contacts, with W. Fulton and S. Kleiman, in Algebraic Geometry – Open Problems, Springer Lect. Notes in Math. 997 (1983), 156–196.
- [26] Global Questions in the Topology of Singular Spaces, Plenary Address, **Proceedings of the International Congress of Mathematicians**, 1983, Polish Scientific Publishers, Warsaw (1984).
- [27] Classes Caractéristiques des Images Directes des Fibres Vectoriels pour les Rêvêtements, with W. Fulton, Comptes Rendues Acad. Sci. Paris 299 (1984), 379–83.
- [28] Notes on Examples of Intersection Homology, Lefschetz Fixed Point Theorem, and Problems in Intersection Homology, with M. Goresky, in Bern Intersection Homology Seminar, A. Borel, ed., Progress in Mathematics, Birkhäuser, 1984.
- [29] Open Problems in Algebraic Groups, with W. Borho and J.-L. Brylinski, Proc. Twelfth International Symposium, Taniguchi Foundation (1984), 3–5.
- [30] Construction Élémentaire des Faisceaux Perverses, with K. Vilonen, Comptes Rendues Acad. Sci. Paris 299 (1984), 443–446.
- [31] Lefschetz Fixed Point Theorem for Intersection Homology, with M. Goresky, Commentari Math. Helv. 60 (1985), 366–391.
- [32] A Note on Primitive Ideals and Characteristic Classes, with W. Borho and J.-L. Brylinski, in *Geometry Today*, 11–20, Birkhäuser Prog. in Math., 1985.
- [33] Cohomologie Equivariante Délocalisé, with P. Baum and J.-L. Brylinski, Comptes Rendues Acad. Sci. Paris 300 (1985), 605–609.
- [34] Elementary Construction of Perverse Sheaves, with Kari Vilonen, Inventiones Math. 84 (1986), 403–435.
- [35] Simplicial Intersection Homology, with M. Goresky, appendix to “Elementary Construction of Perverse Sheaves,” Inventiones Math. 84 (1986), 432–433.

- [36] Springer's Weyl Group Representations through Characteristic Classes of Cone Bundles, with W. Borho and J. L. Brylinski, *Math. Annalen* 278 (1987), 273–289, volume in honor of F. Hirzebruch.
- [37] Chern Classes of Direct Image Bundles for Covering maps, with W. Fulton, *Annals of Mathematics* 125 (1987), 1–92.
- [38] Notes on Motivic Cohomology, with A. H. Beilinson and V. Schechtman, *Duke Math. Journal* 54 (1987), 679–710, volume in honor of Yu. I. Manin.
- [39] On the Topology of Algebraic Torus Actions, with M. Goresky, Algebraic Groups Utrecht 1986, conference in honor of T. A. Springer, Springer Lect. Notes. in Math. 1271 (1987), 73–90.
- [40] Combinatorial Geometries, Grassmannians, and the Moment Map, with I. M. Gelfand, M. Goresky, and V. Serganova, *Advances in Math.* 63 (1987), 301–316.
- [41] *Stratified Morse Theory*, with Mark Goresky, Springer-Verlag, *Ergebnisse* vol. 14 (1988), translated into Russian by Mir Press, Moscow.
- [42] On the Geometry of Complete Quadrics, with C. DeConcini, M. Goresky, and C. Procesi, *Commentari Math. Helv.* 63 (1988), 337–413.
- [43] Perverse Sheaves with Singularities Along the Curve $y^n = x^m$, with Kari Vilonen, *Commentari Math. Helv.* 63 (1988), 89–102.
- [44] *Primitive ideals and cone bundles*, with W. Borho and J.-L. Brylinski, *Birkhäuser Prog. in Math.* 78 (1989).
- [45] Classical Projective Geometry and Modular Varieties, with Mark McConnell, in *Algebraic Analysis, Geometry, and Number Theory*, J.-I. Igusa, ed., Johns Hopkins Univ. Press (1989), 237–290.
- [46] A Geometric Setting for the Quantum Deformation of GL_n , with A. Beilinson and G. Lusztig, *Duke Math. J.* 61 (1990), 655–677.
- [47] Higher Logarithms, with R. Hain, *Illinois J. of Math.* 34 (1990), 392–475.
- [48] Simplicial Differential Forms with Poles, with J. P. Brasselet and M. Goresky, *American J. of Math.* 113 (1991), 1019–1052.
- [49] *Intersection Homology and Perverse Sheaves*, Colloquium Lecture notes distributed by the AMS, (1991).
- [50] Lefschetz Numbers of Hecke Correspondences, with Mark Goresky, in *Zeta Functions to Picard Modular Surfaces*, edited by R. Langlands and D. Ramakrishnan, 465–78 (1992).
- [51] A Combinatorial Formula for the Pontrjagin Classes, with I. M. Gelfand, *Bull. Amer. Math. Soc.* 26, No. 2 (1992), 304–309.
- [52] Microlocal perverse sheaves, with S. Gelfand and K. Vilonen, preprint (1992).
- [53] Explicit Reduction Theory for Siegel Modular Threefolds, with M. McConnell, *Inventiones Math.* 111 (1993), 575–625.

- [54] Geometric Construction of Polylogarithms, with M. Hanamura, *Duke Math. Journal* 70 (1993), 481–516.
- [55] Local Contribution to the Lefschetz Fixed Point Formula, with M. Goresky, *Inventiones Math.* 111 (1993), 1–33.
- [56] Combinatorial Differential Manifolds, **Topological Methods on Modern Mathematics**, conference in honor of J. Milnor, M. Spivak, ed., Publish or Perish Press (1993), 203–222.
- [57] Delocalized Equivariant Cohomology for Smooth Circle Actions, with J.-L. Brylinski and Paul Baum, preprint (1993).
- [58] Weighted Cohomology, with G. Harder and M. Goresky, *Inventiones Math.* 116 (1994), 139–213, volume in honor of F. Hirzebruch.
- [59] A Compactification of Configuration Space, with W. Fulton, *Annals of Math.* 139 (1994), 183–225.
- [60] Geometric Construction of Polylogarithms, II, with M. Hanamura, the Gelfand Conference proceedings Vol. 2, *Progress in Mathematics*, Birkhäuser (1995).
- [61] Intersection Theory on Spherical Varieties, with W. Fulton, F. Sottile, and B. Sturmfels, *J. Alg. Geom.* 4 (1995), 181–93.
- [62] Perverse Sheaves and Quivers, with S. Gelfand and K. Vilonen, *Duke Math. J.* 83 (1996), no. 3, 621–643.
- [63] Discrete Series Characters and the Lefschetz Formula for Hecke Operators, with R. Kottwitz and M. Goresky, *Duke Math. J.* 89 (1997), no. 3, 477–554.
- [64] Equivariant Cohomology, Koszul Duality, and the Localization Theorem, with M. Goresky and R. Kottwitz, *Invent. math.* 131 (1998), no. 1, 25–83.
- [65] Correction to “Discrete series characters and the Lefschetz formula for Hecke operators”, *Duke Math. J.* 92 (1998), no. 3, 665–666.
- [66] Making conical compactifications wonderful, with C. Procesi, *Selecta Math. (N.S.)* 4 (1998), no. 1, 125–139.
- [67] Intersection homology of toric varieties and a conjecture of Kalai, with Tom Braden, *Comment. Math. Helv.* 74 (1999), no. 3, 442–455.
- [68] L’algèbre de cohomologie du complément, dans un espace affine, d’une famille finie de sous-espaces affines, with P. Deligne and M. Goresky, *Michigan Math. J* 48 (2000), 121–136.
- [69] From moment graphs to intersection cohomology, with Tom Braden, *Math. Ann.* 321, no. 3, (2001), 533–551.
- [70] Geometry of compactifications of locally symmetric spaces, with Lizhen Ji, *Ann. de L’Institut Fourier* 52 (2002), no. 2, 103 pp.

- [71] Local intersection cohomology of Baily-Borel compactifications, with A. Nair, M. Goresky and G. Harder, *Compositio Math.* 234 (3), (2002), 243–268.
- [72] The topological trace formula, with Mark Goresky, *J. reine angew. Math.* 560 (2003), 77–150.
- [73] Purity of equivalued affine springer fibers, with Mark Goresky and Robert Kottwitz, (2003) preprint.
- [74] Homology of affine springer fibers in the unramified case, with Mark Goresky and Robert Kottwitz, *Duke Math. J.* 121, No. 3, (2004), 509–561.
- [75] Regular Points in Affine Springer Fibers, with Mark Goresky and Robert Kottwitz, *Michigan Math. J.* 53, (2005), 97–107.
- [76] The von Neumann relation generalized to coarsening of three-dimensional microstructures, with David J. Srolovitz, *Nature* 446, (2007), 1053–1055.