PUBLICATIONS

of

H. Blaine Lawson, Jr.

- [1] Stretching phenomena in mappings of spheres, Proceedings of the American Mathematical Society **19** (1968), 433-435.
- [2] Local rigidity theorems for minimal hypersurfaces, Annals of Mathematics 89 (1969), 187-197.
- [3] Compact minimal surfaces in S³, pp. 275-282 in Proceedings of Symposia in Pure Mathematics 15, Global Analysis, A. M. S., Providence, 1970.
- [4] The global behavior of minimal surfaces in S^n , Annals of Mathematics, **92** (1970), 224-262.
- [5] Complete minimal surfaces in S^3 , Annals of Mathematics, **92** (1970), 335-374.
- [6] The unknottedness of minimal embeddings, Inventiones Math. 11 (1970), 183-187.
- [7] The Riemannian geometry of holomorphic curves, Carolina Conference Proceedings, Holomorphic Mappings and Minimal Surfaces, Chapel Hill, North Carolina (1970), 86-107.
- [8] Rigidity theorems in rank-1 symmetric spaces, Joural of Differential Geometry, 4 (1970), 349-357.
- [9] Codimension-one foliations of spheres, Bulletin of A. M. S. 77 (1971), 437-438.
- [10] Some intrinsic characterizations of minimal surfaces, Journal d'Analyse Mathematique 24 (1971), 151-161.
- [11] Minimal submanifolds of low cohomogeneity (with Wu-yi Hsiang), Journal of Differential Geometry 5 (1971), 1-38.
- [12] Codimension-one foliations of spheres, Annals of Mathematics 94 (1971), 494-503.
- [13] Spherical images of convex surfaces, Proceedings of the American Mathematical Society 31 (1972), 635-636.
- [14] Fibered knots and foliations of highly connected manifolds (with Alan H. Durfee), Inventiones Mathematicae 17 (1972), 203-215.
- [15] Compact manifolds of non-positive curvature (with S.T. Yau), Journal of Differential Geometry 7 (1972), 211-228.
- [16] The equivariant Plateau problem and interior regularity, Transactions of the American Mathematical Society 173 (1972), 231-249.
- [17] Lectures on Minimal Submanifolds, I.M.P.A. Press, Rio de Janeiro, 1973.
- [18] On stable currents and their application to global problems in real and complex geometry (with James Simons), Annals of Mathematics **98** (1973), 427-450.
- [19] Boundaries of complex analytic varieties (with F. Reese Harvey), Bull. A. M. S. 80 (1974), 180-184.
- [20] Minimal Varieties in Real and Complex Geometry, Les Presses de L'Universite de Montreal, 1974.
- [21] Transgressions, Chern-Simons invariants and the classical groups (with James L. Heitsch), Journal of Differential Geometry, 9 (1974), 423-434.
- [22] Scalar curvature, non-abelian group actions, and the degree of symmetry of exotic spheres (with Shing Tung Yau), Commentarii Mathematici Helvetici **49** (1974), 232-244.

- [23] Extending minimal varieties (with F.R. Harvey), Inventiones Mathematicae 28 (1975), 209-226.
- [24] The stable homology of a flat torus, Mathematica Scandinavica **36** (1975), 49-73.
- [25] Minimal varieties, Differential Geometry (Proc. Sympos. Pure Math., Vol XXVII, Stanford University, Stanford, Calif., 1973), Part 1, pp. 143-175. Amer. Math. Soc. Providence, R. I., 1975.
- [26] Foliations, Bull. A. M. S. 80 (1974), 369-418.
- [27] On boundaries of complex analytic varieties, I (with F.R. Harvey), Annals of Mathematics 102 (1975), 223-290.
- [28] Geometric aspects of the generalized Plateau problem, pp. 7-13 in Proceedings of the International Congress of Mathematicians, 1974, vol.2, Vancouver, Canada, 1975.
- [29] The quantitative theory of foliations, Proceedings of the CBMS Regional Conference Series in Mathematics 27, American Mathematical Society, Providence, 1977.
- [30] The question of holomorphic carriers, Proceedings of Symposia in Pure Mathematics **30**, American Mathematical Society (1976), 115-124.
- [31] Non-existence, non-uniqueness and irregularity of solutions to the minimal surface system (with Robert Osserman), Acta Mathematica **139** (1977), 1-17.
- [32] On boundaries of complex analytic varieties, II (with F. Reese Harvey), Annals of Mathematics 106 (1977), 213-238.
- [33] Stability and gap phenomena for Yang-Mills fields (with Jean-Pierre Bourguignon and James Simons), Proceedings of the National Academy of Sciences of the USA 76 (1979), 1550-1553.
- [34] Geometries associated to the group SU(n) and varieties of minimal submanifolds arising from the Cayley arithmetic (with Reese Harvey), pp. 43-59 in "Minimal Submanifolds and Geodesics", Kaigai Publications, Tokyo, 1978.
- [35] A constellation of minimal varieties defined over the group G_2 (with Reese Harvey), pp. 167-187 in "Partial Differential Equations and Geometry", Marcel Dekker, New York, 1979.
- [36] Thurston's work on foliations, Notices of the A. M. S. **76** (1979), 294-295.
- [37] Clifford bundles, immersions of manifolds and the vector field problem (with M.L. Michelsohn), Journal of Differential Geometry, 15 (1980), 237-267.
- [38] Spin and scalar curvature in the presence of a fundamental group. I (with M. Gromov), Annals of Mathematics **111** (1980), 209-230.
- [39] The classification of simply connected manifolds of positive scalar curvature (with M. Gromov), Annals of Mathematics **111** (1980), 423-434.
- [40] Stability and isolation phenomena for Yang-Mills fields (with J.-P. Bourguignon), Communications in Mathematical Physics 79 (1981), 189-230.
- [41] A geometria differencial dos campos de Yang-Mills, I.M.P.A. Press, Rio de Janeiro, 1980.
- [42] On the mean curvature function for compact surfaces (with R. Tribuzy), Journal of Differential Geometry 16 (1981), 179-183.
- [43] Yang-Mills Theory: its physical origins and differential geometric aspects (with J.-P. Bourguigon), pp. 395-421 in "Seminar on Differential Geometry", (Ed. S.-T. Yau), Annals of Mathematics Studies 102, Princeton University Press, Princeton, 1982.
- [44] Calibrated foliations (with R. Harvey), American Journal of Mathematics 104 (1982), 607-633,
- [45] Calibrated geometries (with R. Harvey), Acta Mathematica 148 (1982), 47-157.

- [46] Complete manifolds of positive scalar curvature, Proceedings of the 1981 Symposium on Differential Geometry and Differential Equations (Shanghai-Hefei) Science Press, Beijing (1984), 147-182.
- [47] The minimal varities associated to a closed form (with R. Harvey), pp. 217-223 in "Seminar on Minimal Submanifolds", (Ed. E. Bombieri), Annals of Math. Studies No. 103, Princeton Univ. Press, Princeton, 1983.
- [48] Positive scalar curvature and the Dirac operator on complete Riemannian manifolds (with M. Gromov), Publ. I.H.E.S., 58 Press Universitaires de France (1983), 295-408.
- [49] An intrinsic characterization of Kahler manifolds (with R. Harvey), Inventiones Math. 74 No. 2 (1983), 169-198.
- [50] On Alexandrov-Bernstein Theorems in hyperbolic space (with M. do Carmo), Duke Math. Journal 50 No. 4 (1983) 995-1003.
- [51] Embedding and surrounding with positive mean curvature (with M.L. Michelsohn), Inventiones Math. 77 (1984), 399-419.
- [52] Surfaces minimales et la construction de Calabi-Penrose, pp. 197-212 in Séminaire Bourbaki 1983-84, Astérisque 121-122, Société Mathématique de France, Paris, 1985. (1984).
- [53] Approximation by positive mean curvature immersions; Frizzing (with M.L. Michelsohn), Inventiones Math. 77 (1984), 421-426.
- [54] Topologically non-singular minimal cones (with P. Gauduchon), Indiana Math. J. 34 No. 4 (1985), 915-927.
- [55] The Theory of Gauge Fields in Four Dimensions, CBMS Regional Conference Series, No. 58, A.M.S., Providence, 1985.
- [56] The structure of stable minimal hypersurfaces near a singularity (with R. Gulliver), Proc. of Symp. in Pure Math. 44 (1986), 213-237.
- [57] Complex analytic geometry and measure theory (with R. Harvey), Proc. of Symp. in Pure Math. 44 (1986), 261-274.
- [58] Les surfaces minimales (with J.-P. Bourguignon at C. Margerin) Pour la Science, No. 99 Janvier (1986), 90-101.
- [59] La classification des 2-spheres minimales dans l'espace projectif complexe, pp. 131-149 in "Théorie des Variétiés Minimales et Applications", Astérisque 154-5, Société Math. de France, Paris, 1987.
- [60] Sous-variétiés associatives et courbes holomorphes dans S⁶, pp. 209-220 in "Théorie des Variétiés Minimales et Applications", Astérisque 154-5, Société Math. de France, Paris, 1987.
- [61] Hyperbolic 4-manifolds and conformally flat 3-manifolds (with M. Gromov and W. Thurston), Publ. I.H.E.S. 68 (1989) 27-45.
- [62] Quaternionic reduction and quaternionic orbifolds, (with K. Galicki), Math. Ann. 282 (1989), 1-21.
- [63] Holomorphic symmetries (with Steven S.T. Yau), Ann. Scien. Ecole Norm. Sup. 20 (1987), 557-577.
- [64] The topological structure of the space of algebraic varieties, Bull. A.M.S. 17 (1987), 326-330.
- [65] Algebraic cycles, Bott periodicity and the Chern characteristic map (with M.-L. Michelsohn), pp. 241-264 in "The mathematical heritage of Herman Weyl", Proc. of Symp. in Pure math. 48, A.M.S., Providence, 1988.

- [66] Algebraic cycles and homotopy theory, Annals of Math. **129** (1989), 253-291.
- [67] Spin Geometry (with M.-L. Michelsohn), Princeton University Press, Princeton, N.J., 1989.
- [68] Algebraic cycles and group actions (with M.-L. Michelsohn), pp. 261-278 in "Differential Geometry" (Lawson and Tenenblat, Eds.), Longman Press, London, 1991.
- [69] Differential Geometry (Editor, with k. Tenenblat), Longman Press, London, 1991.
- [70] A theory of algebraic cocycles (with E. Friedlander), Bull. A.M.S. 26 (1992), 264-268.
- [71] A theory of algebraic cocycles (with E. Friedlander), Ann. of Math. 136 (1992), 361-428.
- [72] Algebraic cycles and infinite loop spaces (with C. Boyer, P. Lima-Filho, B. Mann, M.-L. Michelsohn), Inventiones Math. 113 (1993), 373-388.
- [73] A Theory of Characteristic Currents Associated with a Singular Connection (with R. Harvey), Astérisque 213, Société Math. de France, Paris, 1993.
- [74] Levels of holomorphic approximation, pp. 574-585 in Proceedings of the International Congress of Mathematicians, Zürich, 1994, Birkhäuser Press, Basel, 1995.
- [75] A theory of characteristic currents associated with a singular connection (with R. Harvey), Bull. A.M.S. 31 (1994), 54-64.
- [76] Geometric residue theorems (with R. Harvey) Amer. J. Math. 117 (1995), 829-873.
- [77] Spaces of algebraic cycles, pp. 137-214 in "Surveys in Differential Geometry" (C. C. Hsiung and S.-T. Yau, Editors), International Press, Boston, 1995.
- [78] Moving algebraic cycles of bounded degree (with E. Friedlander), Inventiones Mathematicae 132 (1998), 91-119.
- [79] Duality relating spaces of algebraic cocycles and cycles, (with E. Friedlander), Topology 36 (1996), 533-565.
- [80] Algebraic cycles and equivariant cohomology theories, (with P. Lima-Filho and M.-L. Michelsohn) Proc. of London Math. Soc., 73 (1996), 679-720.
- [81] On equivariant algebraic suspension (with P. Lima-Filho and M.-L. Michelsohn), J. of Algebraic Geometry 7 (1998), 627-650.
- [82] Singularities and Chern-Weil Theory I The local MacPherson formula (with R. Harvey) Asian J. Math 4 (2000), 71-96.
- [83] Morse Theory and Stokes' Theorem (with R. Harvey), pp. 271-323 in Surveys in Differential Geometry, vol VII, International Press, Boston, 2000.
- [84] Finite volume flows and Morse theory (with R. Harvey) Annals of Math. 153 no.1 (2001), 1-25.
- [85] Lefschetz-Pontrjagin dualilty for differential characters (with R. Harvey), Anais da Academia Brasileira de Ciências 73 no. 2 (2001), 145-160. ArXiv:math.DG/0512528
- [86] Singularities and Chern-Weil Theory II Geometric atomicity (with R. Harvey) Duke Math. J. 119 No. 1 (2003), 119-158.
- [87] Algebraic cycles and the classical groups, I, The real case (with P. Lima-Filho and M.-L. Michelsohn), Topology 42 (2003), 467-506.
- [88] A de Rham Federer theory of differential characters and character duality (with R. Harvey and J. Zweck), Amer. J. Math. 125 (2003), 791-847.
- [89] Boundaries of varieties in projective manifolds, (with R. Harvey), J. Geom. Analysis 14 (2004), 673-695. ArXiv:math.CV/0512490.

- [90] Graph mappings and Poincaré Duality (with E. Friedlander), Math. Ann. 343 (2009), 431-461.
- [91] Review of Pattern Formation in Biology, Vision and Dynamics (with M.-L. Michelsohn), Gazette des Mathematiciens, Soc. Math. de France., No. 91, Jan. 2002, 59-61.
- [92] Cycles and spectra, Bull. Braz. Math. Soc. New Series **34** (2003), 77-105.
- [93] Introduction to the Dirac operator, pp. 3-12 in "Dirac Operators, Yesterday and Today", International Press, Somerville, Massachusetts, 2005.
- [94] Relations to geometry and topology via the Index Theorem, pp. 117-144 in "Dirac Operators, Yesterday and Today", International Press, Somerville, Massachusetts, 2005.
- [95] Algebraic cycles and the classical groups, II, The quaternionic case (with P. Lima-Filho and M.-L. Michelsohn), Geometry and Topology 9, (2005), 1187-1220.
- [96] From sparks to grundles, differential characters, (with R. Harvey), Comm. in Anal. and Geom. 14, no.1 (2006), 1-34. ArXiv:math. DG/0306193
- [97] Projective hulls and the projective Gefand transformation, (with R. Harvey), Asian J. Math. 10, no. 2 (2006), 279-318. ArXiv:math.CV/0510286.
- [98] Projective linking and boundaries of holomorphic chains in projective manifolds, Part I, (with R. Harvey), in "The Many Facets of Geometry: a Tribute to Nigel Hitchin", J.-P. Bourguignon, O. Garcia-Prada, Simon Salamon, Eds., Oxford University Press, Oxford, England, 2008. ArXiv:math.CV/0512379
- [99] Projective linking and boundaries of holomorphic chains in projective manifolds, Part II, (with R. Harvey), pp. 365-380 in "Inspired by S. S. Chern", Phillip Griffiths, Ed., Nankai Tracts in Mathematics, vol. 11, World Scientific Publishing Co., Singapore, 2006. ArXiv:math.CV/0608029
- [100] D-bar sparks, (with R. Harvey), Proc. London Math. Soc. 97 (2008), 1-30. ArXiv:math.CV/0512247
- [101] Stokes' Theorem and minimal surfaces, Contemporary Mathematics **395** (2006), 67-82.
- [102] Plurisubharmonic functions in calibrated geometries, (with R. Harvey), ArXiv:math.CV/0601484.
- [103] Boundaries of positive holomorphic chains and the relative Hodge question, (with R. Harvey), Astérisque 328 (2009), 207-222. ArXiv:math.CV/0610533
- [104] Remarks on the Alexander-Wermer Theorem, (with R. Harvey), Mathemática Contemporânea 31 (2006), 53-64. ArXiv:math.CV/0610611
- [105] The projective hull of certain curves in \mathbb{C}^n , (with R. Harvey and J. Wermer), Astérisque **322** (2008), 241-254. ArXiv:math.CV/0611482.
- [106] An introduction to potential theory in calibrated geometry, (with R. Harvey), Amer. J. Math. 131 no. 4 (2009), 893-944. ArXiv:math.0710.3920.
- [107] Duality of positive currents and plurisubharmonic functions in calibrated geometry, (with R. Harvey), Amer. J. Math. 131 no. 5 (2009), 1211-1240. ArXiv:math.0710.3921.
- [108] Dirichlet duality and the non-linear Dirichlet problem, (with R. Harvey), Comm. on Pure and Applied Math. 62 (2009), 396-443.
- [109] On the complement of the projective hull in \mathbb{C}^n , (with J. Wermer). ArXiv:math.CV/0704.2849.
- [110] Analytic disks and the projective hull, (with J. Wermer). ArXiv:math.CV/0806.4776.
- [111] Plurisubharmonicity in a general geometric context, (with R. Harvey), Geometry and Analysis 1 (2010), 363-401. ArXiv:0804.1316
- [112] Dirichlet duality and the non-linear Dirichlet problem on Riemannian manifolds, (with R. Harvey), J. Diff. Geom. 88 No. 3 (2011), 395-482. ArXiv:0907.1981.

- [113] Hyperbolic polynomials and the Dirichlet problem, (with R. Harvey), ArXiv:0912.5220.
- [114] Split special Lagrangian geometry, (with R. Harvey), pp. 42-90 in "Metric and Differential Geometry", eds. X. Dai and X. Rong, Progress in Mathematics vol. 297, Birkhäuser Press, Basel, 2012. ArXiv:1007.0450.
- [115] The early mathematical work of Jeff Cheeger, pp. xix-xxxi in "Metric and Differential Geometry", eds. X. Dai and X. Rong, Progress in Mathematics vol. 297, Birkhäuser Press, Basel, 2012.
- [116] Gårding's theory of hyperbolic polynomials, (with R. Harvey), Communications in Pure and Applied Mathematics 66 no. 7 (2013), 1102-1128.
- [117] The restriction theorem for fully nonlinear subequations, (with R. Harvey), Ann. Inst. Fourier, 64 no. 1 (2014), p. 217-265. ArXiv:1101.4850.
- [118] Potential theory on almost complex manifolds, (with R. Harvey), Ann. Inst. Fourier, Vol. 65 no. 1 (2015), p. 171-210. ArXiv:1107.2584.
- [119] Relative holomorphic cycles and duality, (with R. Harvey), in preparation.
- [120] p-convexity, p-plurisubharmonicity and the Levi problem, (with R. Harvey), Indiana Univ. Math. J. 62 No. 1 (2013), 149-169. ArXiv:1111.3895.
- [121] Geometric plurisubharmonicity and convexity an introduction, (with R. Harvey), Advances in Math. 230 (2012), 2428-2456. ArXiv:1111.3875.
- [122] Lagrangian plurisubharmonicity and convexity in symplectic geometry, (with R. Harvey), in preparation.
- [123] Existence, uniqueness and removable singularities for nonlinear partial differential equations in geometry, (with R. Harvey), pp. 102-156 in "Surveys in Differential Geometry 2013", vol. 18, H.-D. Cao and S.-T. Yau eds., International Press, Somerville, MA, 2013. ArXiv:1303.1117.
- [124] The equivalence of viscosity and distributional subsolutions for convex subequations the strong Bellman principle, (with R. Harvey), Bulletin Brazilian Math. Soc. 44 No. 4 (2013), 621-652. ArXiv:1301.4914.
- [125] Removable singularities for nonlinear subequations, (with R. Harvey), Indiana Univ. Math. J., 63, No. 5 (2014), 1525-1552. ArXiv:1303.0437.
- [126] Notes on the article: A current approach to Morse and Novikov theories, (with R. Harvey), Rendiconti di Matematica, Serie VII, 36 (2015), 89-94.
- [127] Characterizing the strong maximum principle for constant coefficient subequations, (with R. Harvey), Rendiconti di Matematica 37 (2016), 63-104. ArXiv:1303.1738.
- [128] The AE Theorem and Addition Theorems for quasi-convex functions, (with R. Harvey), ArXiv:1309:1770.
- [129] Notes on the differentiation of quasi-convex functions, (with R. Harvey), ArXiv:1309:1772.
- [130] Tangents to subsolutions existence and uniqueness, Part I, (with R. Harvey), to appear in Ann. Fac.de Sciences de Toulouse. ArXiv:1408.5797.
- [131] Tangents to subsolutions existence and uniqueness, Part II, (with R. Harvey), J. Geom. Analysis, 27 (2017), 2190-2223. ArXiv:1408.5851.
- [132] Smooth approximation of plurisubharmonic functions on almost complex manifolds, (with R. Harvey and S. Pliš), Math. Ann. 366, issue 3, (2016), 929-940. ArXiv:1411.7137.
- [133] The Dirichlet problem with prescribed asymptotic singularities, (with R. Harvey), Advances in Math. 303 (2016), 1319-1357. ArXiv:1508.02962.
- [134] Lagrangian potential theory in symplectic geometry, (with R. Harvey).
- [135] Pluriharmonics in general potential theories, (with R. Harvey).