

References

- [1] Yau, Shing-Tung, On the fundamental group of manifolds of non-positive curvature, Proc. Nat. Acad. Sci., (1970) Vol. 67, No. 2, page 509.
- [2] Yau, Shing-Tung, On the fundamental group of compact manifolds of non-positive curvature, Ann. Math., 93 (1971), pages 579-585.
- [3] Yau, Shing-Tung, Compact flat Riemannian manifolds, J. Diff. Geom., 6 (1972), pages 395-402.
- [4] Lawson, Jr. H. Blaine and Yau, Shing-Tung, Compact manifolds of nonpositive curvature, J. Diff. Geom., 7 (1972), pages 211-228.
- [5] Yau, Shing-Tung, Remarks on conformal transformations, J. Diff Geom., 8 (1973), pages 369-381.
- [6] Yau, Shing-Tung, Some Global Theorems on non-complete surfaces, Comment. Math., Helv. 48 (1973), pages 177-187.
- [7] J.-P. Bourguignon and Yau, Shing-Tung, Sur les metriques riemanniennes a courbure de Ricci nulle sur le quotient d'une surface $K3$, C.R. Acad. Sci. Paris Ser. A-B, 277 (1973), A1175-A1177.
- [8] J.-P. Bourguignon and Yau, Shing-Tung, Geometrie differentielle, C.R. Acad. Sc., Paris, 277 (1973), pages 1175-1177.
- [9] Yau, Shing-Tung, On the curvature of compact Hermitian manifolds, Inv. Math., 25 (1974), pages 213-239.
- [10] H.B. Lawson and Yau, Shing-Tung, Scalar curvature, non-Abelian group actions, and the degree of symmetry of exotic spheres, Comm. Math. ,Helv., 49 (1974), pages 232-244.
- [11] Yau, Shing-Tung, Submanifolds with constant mean curvature, I, Amer. J. Math., 98 (1974), pages 346-366.
- [12] Yau, Shing-Tung, Curvature preserving diffeomorphisms, Ann. of Math., 100 (1974), pages 121-130.
- [13] Yau, Shing-Tung, Non-existence of continuous convex functions on certain Riemannian manifolds, Math. Ann., 207 (1974), pages 269-270.
- [14] Yau, Shing-Tung, Isoperimetric constants and the first eigenvalue of a compact Riemannian manifold, Ann. Sci. Ecole Norm. Sup., Paris, 8 (1975), pages 487-507.
- [15] Yau, Shing-Tung, Harmonic functions on complete Riemannian manifolds, Comm. Pure Appl. Math., 28 (1975), pages 201-228.
- [16] S.Y. Cheng and Yau, Shing-Tung, Differential equations on Riemannian manifolds and their geometric applications, Comm. Pure Appl. Math., 28 (1975), pages 333-354.
- [17] Yau, Shing-Tung, Submanifolds with constant mean curvature, II, Amer. J. Math., 97 (1975), pages 76-100.
- [18] R. Schoen, L. Simon and Yau, Shing-Tung, Curvature estimates for minimal hypersurfaces, Acta Math., 134 (1975), pages 275-288.
- [19] Yau, Shing-Tung, Intrinsic measures of compact complex manifolds, Math. Ann., 212 (1975), pages 317-329.

- [20] Yau, Shing-Tung, Parallelizable manifolds without complex structure, *Topology*, 15 (1976), pages 51-53.
- [21] Yau, Shing-Tung, Some function-theoretic properties of complete Riemannian manifolds and their applications to geometry, *Indiana Univ. Math. J.*, 25 (1976), 659-670. Also Erratum to *Indiana Univ. Math. J.*, 31 (1982), 607.
- [22] S.-Y. Cheng and Yau, Shing-Tung, On the regularity of the solution of the n -dimensional Minkowski problem, *Comm. Pure Appl. Math.*, 29 (1976), pages 495-516.
- [23] R. Schoen and Yau, Shing-Tung, Harmonic maps and the topology of stable hypersurfaces and manifolds with non-negative Ricci curvature, *Comment. Math.*, 51 (1976), pages 333-341.
- [24] Y.-T. Siu and Yau, Shing-Tung, On the structure of complete simply-connected Kähler manifolds with nonpositive curvature, *Proc. Nat'l. Acad. Sci., USA* 73 (1976), 1008.
- [25] S.-Y. Cheng and Yau, Shing-Tung, Maximal space-like hypersurfaces in the Lorentz-Minkowski spaces, *Ann. Math.*, 104 (1976), pages 407-419.
- [26] Yau, Shing-Tung, Remarks on the group of isometries of a Riemannian manifold, *Topology*, 16 (1977), pages 239-247.
- [27] S.-Y. Cheng and Yau, Shing-Tung, On the regularity of the Monge-Ampere equation $\det(2u_{x_i x_j}) = F(x, u)$, *Comm. Pure Appl. Math.*, 30 (1977), pages 41-68.
- [28] Yau, Shing-Tung, Calabi's conjecture and some new results in algebraic geometry, *Proc. Nat'l. Acad. Sci., USA* 74 (1977), pages 1798-1799.
- [29] Y.T. Siu and Yau, Shing-Tung, Complete Kähler manifolds with nonpositive curvature of faster than quadratic decay, *Ann. Math.*, 105 (1977), 225-264. Also Errata to the paper "Complete Kähler manifolds with nonpositive curvature of faster than quadratic decay", *Ann. Math.*, 109 (1979), 621-623.
- [30] S.-Y. Cheng and Yau, Shing-Tung, Hypersurfaces with constant scalar curvature, *Math. Ann.*, 225 (1977), pages 195-204.
- [31] W. H. Meeks, III and Yau, Shing-Tung, The classical plateau problem and the topology of 3-manifolds, *Minimal Submanifolds and Geodesics*, Kaigai Publications, Tokyo (1978), pages 101-102.
- [32] Yau, Shing-Tung, On the Ricci curvature of a compact Kähler manifold and the complex Monge-Ampere equation, I., *Comm. Pure Appl. Math.*, 31 (1978), pages 339-411.
- [33] R. Schoen and Yau, Shing-Tung, On univalent harmonic maps between surfaces, *Inv. Math.*, 44 (1978), pages 265-278.
- [34] Yau, Shing-Tung, On the heat kernel of a complete Riemannian manifold, *J. Math. pures et appl.*, 57 (1978) pages 191-201.
- [35] R. Schoen and Yau, Shing-Tung, Incompressible minimal surfaces, three-dimensional manifolds with nonnegative scalar curvature, and the positive mass conjecture in general relativity, *Proc. Nat'l. Acad. Sci., USA*, 75 (1978), 2567.
- [36] Yau, Shing-Tung, A general Schwarz lemma for Kähler manifolds, *Amer. J. Math.*, 100 (1978), pages 197-203.
- [37] Kazdan, Jerry L. "A remark on the preceding paper of S.T. Yau: 'on the Ricci curvature of a compact Kähler manifold and the complex Monge-Ampere equations. I' ". *Comm. Pure Appl. Math* 31 (1978), no. 3, 413-414.

- [38] Yau, Shing-Tung, Metriques de Kähler-Einstein sur les varietes ouvertes Notes by J.-P. Bourguignon, Seminaire Palaiseau, Asterisque, 58 (1978), 163-167.
- [39] R. Schoen and Yau, Shing-Tung, Compact group actions and the topology of manifolds with non-positive curvature, *Topology*, 18 (1979), 361-380. Also *Corrections to Topology* 21, 4 (1982), 483.
- [40] R. Schoen and Yau, Shing-Tung, On the structure of manifolds with positive scalar curvature, *Manuscripta Math.*, 28 (1979), pages 159-183.
- [41] R. Schoen and Yau, Shing-Tung, Proof of the positive-action conjecture in quantum relativity, *Phys. Rev. Lett.*, 42 (1979), pages 547-548.
- [42] R. Schoen and Yau, Shing-Tung, Positivity of the total mass of a general space-time, *Phys. Rev. Lett.*, 43 (1979), pages 1457-1459.
- [43] R. Schoen and Yau, Shing-Tung, Complete manifolds with non-negative scalar curvature and the positive action conjecture in general relativity, *Proc. Nat'l. Acad. Sci., USA*, 76 (1979), pages 1024-1025.
- [44] R. Schoen and Yau, Shing-Tung, Existence of incompressible minimal surfaces and the topology of three dimensional manifolds with nonnegative scalar curvature, *Ann. Math.*, 110 (1979), pages 127-142.
- [45] R. Schoen and Yau, Shing-Tung, On the proof of the positive mass conjecture in general relativity, *Comm. in Math. Phys.*, 65 No. 1 (1979), pages 45-76.
- [46] Yau, Shing-Tung, Harmonic maps between Riemannian manifolds, *Series Lecture Notes in Pure and Appl. Math.*, 48, (Proc. Conf., Park City, Utah, 1977), Dekker, (1979), pages 307-311.
- [47] Bourguignon, JP "Premieres formes de Chern des varietes Kahleriennes compactes", [d'apres E. Calabi, T. Aubin et S.T. Yau]. (French) *Seminaire Bourbaki*, 30e annee (1977/78), Exp. No. 507, pp. 1-21, *Lecture Notes in Math.*, 710, Springer, Berlin, (1979).
- [48] Yau, Shing-Tung, The total mass and the topology of an asymptotically flat space-time, the Chern Symposium 1979, Springer-Verlag (1980), pages 255-259.
- [49] Yau, Shing-Tung, The role of partial differential equations in differential geometry, *Proc. Int'l. Congress Math.*, Helsinki (1980), pages 237-250.
- [50] P.C. Yang and Yau, Shing-Tung, Eigenvalues of the Laplacian of compact Riemann Surfaces and minimal submanifolds, *Ann. Scuola Nor. Sup.*, 7 (1980), pages 55-63.
- [51] S.-Y. Cheng and Yau, Shing-Tung, On the existence of a complete KÄHler metric on noncompact complex manifolds and the regularity of Fefferman's equation, *Comm. Pure Appl. Math.*, 33 (1980), pages 507-544.
- [52] P. Li and Yau, Shing-Tung, Estimates of eigenvalues of a compact Riemannian manifold, *Proc. Symp. Pure Math.*, 36 (1980), pages 205-239.
- [53] R. Schoen, S. Wolpert and Yau, Shing-Tung, Geometric bounds on the low eigenvalues of a compact surface, *Proc. Symp. Pure Math.*, Honolulu, Hawaii, 36 (1980), pages 279-285.
- [54] Y.-T. Siu and Yau, Shing-Tung, Compact KÄHler manifolds of positive bisectional curvature, *Inv. Math.*, 59 (1980), pages 189-204.
- [55] W. H. Meeks, III and Yau, Shing-Tung, Topology of three-dimensional manifolds and the embedding problems in minimal surface theory, *Ann. Math.*, 112 (1980), pages 441-484.

- [56] W.H. Meeks, III and Yau, Shing-Tung, The equivariant Dehn's lemma and the loop theorem, *Comm. Math., Helv.*, 56 (1981), 225-239.
- [57] R. Schoen and Yau, Shing-Tung, The energy and the linear momentum of space-time in general relativity, *Comm. Math. Phys.*, 79 (1981), pages 47-51.
- [58] R. Schoen and Yau, Shing-Tung, Proof of the positive mass theorem, II, *Comm. Math. Phys.*, 79 (1981), pages 231-260.
- [59] S.-Y. Cheng, P. Li and Yau, Shing-Tung, On the upper estimate of the heat kernel of a complete Riemannian manifold, *Amer. J. Math.*, 10-3 (1981), pages 1021-1063.
- [60] J. Cheeger and Yau, Shing-Tung, A lower bound for the heat kernel, *Comm. on Pure Appl. Math.*, 34 No. 4 (1981), pages 465-480.
- [61] N. Mok, Y-T. Siu and Yau, Shing-Tung The Poincare-Lelong equation on complete KÄHler manifolds, *Comp. Math.*, 44 (1981), pages 183-218.
- [62] Yau, Shing-Tung, Survey on partial differential equations in differential geometry, *Seminar on Differential Geometry*, Princeton University Press, (1982), pages 3-71.
- [63] R. Schoen and Yau, Shing-Tung, Complete three-dimensional manifolds with positive Ricci Curvature and Scalar curvature, *Seminar on Differential Geometry*, Princeton University Press, (1982), pages 209-228.
- [64] Y.-T. Siu and Yau, Shing-Tung, Compactification of negatively curved complete KÄHler manifolds of finite volume, *Seminar on Differential Geometry*, Princeton University Press, (1982), pages 363-380.
- [65] Yau, Shing-Tung, Problem section, *Seminar on Differential Geometry*, Princeton University Press, (1982), pages 669-706.
- [66] R. Schoen and Yau, Shing-Tung, Proof that the Bondi Mass is positive, *Phys. Rev. Lett.*, 48 (1982), pages 369-371.
- [67] P. Li and Yau, Shing-Tung, A new conformal invariant and its applications to the Willmore conjecture and the first eigenvalue of compact surfaces, *Invent. Math.*, 69 (1982), pages 269-291.
- [68] W. Meeks, III, L. Simon and Yau, Shing-Tung, Embedded minimal surfaces, exotic spheres, and manifolds with positive Ricci curvature, *Ann. Math.*, 116 (1982), pages 621-659.
- [69] W. Meeks, III and Yau, Shing-Tung, The existence of embedded minimal surfaces and the problem of uniqueness, *Math. Zeit.*, 179 (1982), pages 151-168.
- [70] S.-Y. Cheng and Yau, Shing-Tung, The real Monge-Ampere equation and affine flat structures, 1980 Peking Conference, Science Press, Beijing, (1982), pages 339-370.
- [71] W. Meeks III and Yau, Shing-Tung, The classical plateau problem and the topology of three-dimensional manifolds. The embedding of the solution given by Douglas-Morrey and an analytic proof of Dehn's lemma, *Topology 21-An Inter. J. of Math.*, 4 (1982), pages 409-442.
- [72] *Seminar on Differential Geometry Papers presented at seminars held during the academic year 1979–1980, ed. Yau, Shing-Tung, Princeton University Press, Univ. of Tokyo Press, (1982) ix+706pp.
- [73] M. Freedman and Yau, Shing-Tung, Homotopically trivial symmetries of Haken manifolds are toral, *Topology*, 22 (1983), 179-189.
- [74] N. Mok and Yau, Shing-Tung, Completeness of the KÄHler-Einstein metric on bounded

- domains and the characterization of domains of holomorphy of curvature conditions, Proc. Symp. Pure Math., 39 (1983), pages 309-318.
- [75] P. Li and Yau, Shing-Tung, On the Schrodinger equation and the eigenvalue problem, Comm. Math. Phys., 88 (1983), pages 309-318.
- [76] R. Schoen and Yau, Shing-Tung, The existence of a black hole due to condensation of matter, Comm. Math. Phys., 90 (1983), pages 575-579.
- [77] J. Jost and Yau, Shing-Tung, Harmonic mappings and KÄHler manifolds, Math. Ann., 262 (1983), 145-166.
- [78] Nirenberg, Louis "The work of Yau Shing-Tung". Proceedings of the International Congress of Mathematicians, Vol. 1, 2 (Warsaw, 1983), 15-19, PWN, Warsaw, (1984).
- [79] Kobayashi, Shoshichi "The work of Shing-Tung Yau" (Japanese) Sugaku 35 (1983), no. 2, 121-127.
- [80] Yau, Shing-Tung, Minimal surfaces and their role in differential geometry, Global Riemannian Geometry, Ellis Horwood Ltd., (1984), pages 99-103.
- [81] W.H. Meeks, III, and Yau, Shing-Tung, The equivariant loop theorem for three-dimensional manifolds and a review of the existence theorems for minimal surfaces, The Smith Conjecture, Academic Press, (1984), pages 153-163.
- [82] W. H. Meeks, III and Yau, Shing-Tung, Group actions on R^3 , The Smith Conjecture, Academic Press, (1984), pages 167-179.
- [83] P. Li, R. Schoen and Yau, Shing-Tung, On the isoperimetric inequality for minimal surfaces, Ann. Scuola Norm., 9 (1984), pages 237-244.
- [84] Yau, Shing-Tung, A survey on Kähler-Einstein metrics, Proc. Symp. Pure Math., 41 (1984), pages 285-289.
- [85] S.-Y. Cheng, P. Li and Yau, Shing-Tung, Heat equations on minimal submanifolds and their applications, Amer. J. Math., 106 (1984), pages 1033-1065.
- [86] Yau, Shing-Tung, On the structure of complete manifolds with positive scalar curvature, Differential Geometry and Complex Analysis, Springer-Verlag, (1985), pages 219-222.
- [87] S.-Y. Cheng and Yau, Shing-Tung, Inequality between Chern numbers of singular Kähler surfaces and characterization of orbit space of discrete group of $SU(2,1)$, Contemp. Math., 49 (1985), pages 31-43.
- [88] I.M. Singer, B. Wong, Yau, Shing-Tung and S.S.-T. Yau, An estimate of the gap of the first two eigenvalues in the Schrödinger operator, Ann. Scuola Norm. Sup., Pisa, 12 (1985), pages 319-333.
- [89] Yau, Shing-Tung, Compact three dimensional Kähler manifolds with zero Ricci curvature, Proc. of the Symposium on Anomalies, Geometry and Topology, Argonne, World Scientific, (1985), 395-406.
- [90] J. Jost and Yau, Shing-Tung, A strong rigidity theorem for a certain class of compact complex analytic surfaces, Math. Ann., 271 (1985), pages 143-152.
- [91] Yau, Shing-Tung, Nonlinear Analysis, Lecture notes from the 92nd annual meeting of the Amer. Math. Soc., New Orleans, LS, January (1986).
- [92] L.Z. Gao and Yau, Shing-Tung, The existence of negatively Ricci curved metric on three

- manifolds, *Invent. Math.*, 85 (1986), pages 637-657.
- [93] P. Li and Yau, Shing-Tung, On the parabolic kernel of the Schrödinger operator, *Acta Math.*, 156 (1986), pages 153-201.
- [94] J. Jost and Yau, Shing-Tung, The strong rigidity of locally symmetric complex manifolds of rank one and finite volume, *Math. Ann.*, 275 (1986), pages 291-304.
- [95] S.-Y. Cheng and Yau, Shing-Tung, Complete affine hypersurfaces, Part I, The Completeness of affine metrics, *Comm. Pure Appl. Math.*, Vol. 39, No. 6 (1986).
- [96] K. Uhlenbeck and Yau, Shing-Tung, On the existence of Hermitian-Yang-Mills connections in stable vector bundles, *Comm. Pure Appl. Math.*, 39 (1986), pages 257-293.
- [97] Yau, Shing-Tung, Nonlinear analysis in geometry, *L'Enseignement mathématique revue internationale*, Monographie 33 (1986).
- [98] Yau, Shing-Tung, A survey on the interaction between mathematical physics and geometry, *Internat. J. Mod. Phys.*, 1 No. 4 (1986), pages 881-886.
- [99] G. Tian and Yau, Shing-Tung, Three-dimensional algebraic manifolds with $C_1=0$ and $\chi=-6$ Mathematical aspects of string theory, 543-559, (San Diego, (1986)), *Adv. Ser. Math. Phys.*, 1, World Sci. Publ., Singapore.
- [100] J. Li and Yau, Shing-Tung, Hermitian-Yang-Mills connection on non-Kähler manifolds, Mathematical aspects of string theory, 560-573, (San Diego, (1986)), *Adv. Ser. Math. Phys.*, 1, World Sci. Publ., Singapore.
- [101] G. Tian and Yau, Shing-Tung, Existence of Kähler-Einstein metrics on complete Kähler manifolds and their applications to algebraic geometry, Mathematical aspects of string theory, 574-628, (San Diego, (1986)), *Adv. Ser. Math. Phys.*, 1, World Sci. Publ., Singapore.
- [102] Yau, Shing-Tung, Some recent developments in general relativity, *General relativity and gravitation*, 247-252, (Stockholm, (1986)) Cambridge Univ. Press, Cambridge-New York.
- [103] Yau, Shing-Tung, A survey on the interaction between mathematical physics and geometry, *Int'l. Jour. Mod. Phys. A*, Vol. 1, No. 4, (1986) 881-886; also appears in VIIIth Int'l. Cong. on Math. Phys. (Marseilles, 1986), 305-310, World Sci. Publ., Singapore (see [98]).
- [104] J. Jost and Yau, Shing-Tung, On the rigidity of certain discrete groups and algebraic varieties, *Math. Ann.*, 278, (1987), pages 481-496.
- [105] R. Schoen and Yau, Shing-Tung, The structure of manifolds with positive scalar curvature, *Directions in Partial Differential Equations* (1987), pages 235-242.
- [106] G. Tian and Yau, Shing-Tung, Kähler-Einstein metrics on complex surfaces with $C_1 > 0$, *Comm. Math. Phys.*, (1987) Vol. 112, No. 1, pages 175-203.
- [107] S.-S. Roan and Yau, Shing-Tung, On Ricci flat 3-fold, *Acta. Math. Sinica*, New Series, Vol. 3 (1987), No. 3, pages 256-288.
- [108] Yau, Shing-Tung, Nonlinear analysis in geometry, *L'Enseign. Math. IIe Serie*, 33 No. 1-2 (1987), 109-158 (see [97]).
- [109] Margerin, Christophe, "Fibres stables et metriques d'Hermitte-Einstein (d'apres S.K. Donaldson-K.K. Uhlenbeck-S.T. Yau)." (French) [Stable bundles and Hermite-Einstein metrics after S.K. Donaldson, K.K. Uhlenbeck and S.T. Yau] *Seminaire Bourbaki*, Vol 1986/87. Asterisque No. 152-153 (1987), 5, 263-283 (1988).

- [110] B. Hatfield and Yau, Shing-Tung, An exchange symmetry expansion for the 2-point correlation function of the nonlinear Schrödinger model, *Nucl. Phys.*, B305 (FS23) (1988), pages 16-32.
- [111] D. Christodoulou and Yau, Shing-Tung, Some remarks on the quasi-local mass, *Amer. Math. Soc., Prov. RI, Series Contemp. Math*, 71, (1988), pages 9-14.
- [112] R. Schoen and Yau, Shing-Tung, Conformally flat manifolds, Kleinian groups and scalar curvature, *Inventiones mathematicae*, (1988) Vol. 92, No. 1, pages 47-71.
- [113] *Mathematical Aspects of String Theory*, Proc. of Conf. at U.C., San Diego July 21-Aug. 1, (1986), *Adv. Ser. Math. Phys.*, 1, World Sci. Publ., Singapore, Yau, Shing-Tung, editor.
- [114] Yau, Shing-Tung, Uniformization of geometric structures, *Proc. of Symposia in Pure Math.*, Vol 48. (1988) pages 265-274.
- [115] K. Uhlenbeck and Yau, Shing-Tung, A note on our previous paper On the existence of Hermitian Yang-Mills connections in stable vector bundles, *Comm. in Pure and Appl. Math.*, Vol. XLII (1989) pages 703-707.
- [116] J. Li, F. Zheng and Yau, Shing-Tung, A simple proof of Bogomolov's theorem on class II surfaces with $b_2 = 0$, *II. Journ. Math.*, Vol. 34, No.2 (June (1990), Chen Mem'l. Issue).
- [117] S.S.-Y. Lu and Yau, Shing-Tung, Holomorphic curves in surfaces of general type, *Proceedings of the NAS*, Vol 87, pp. 80-82, Jan. (1990).
- [118] B. Greene, A. Shapere, C. Vafa and Yau, Shing-Tung, Stringy cosmic strings and non-compact CY manifolds, *Nucl. Phys. B*337, 1-3 (1990).
- [119] P. Li and Yau, Shing-Tung, Curvature and holomorphic mappings of complete Kähler manifolds, *Composito Mathematica* Vol. 73 (1990) pages 125-144.
- [120] G. Tian and Yau, Shing-Tung, Complete Kähler manifolds with zero Ricci curvature, I, *Journal of Amer. Math. Soc.* Vol. 3, No. 3, (July (1990)) pages 579-609.
- [121] F. Zheng and Yau, Shing-Tung, Negatively $1/4$ -pinched Riemannian Metric on a Compact Kähler Manifold, *Inventiones mathematicae* Vol. 103 (1991) pp. pages 527-535.
- [122] J. Jost and Yau, Shing-Tung, Harmonic Maps and Kähler Geometry, *Collection Prospects in complex geometry* (1989), Springer, Berlin, (1991) pages 340-370.
- [123] J. Smoller, A. Wasserman, B. McLeod, Yau, Shing-Tung, Smooth static solutions of the Einstein-Yang/Mills equations, *Comm. Math. Phys.*, 143 No. 2 (1991) pages 115-147.
- [124] Yau, Shing-Tung, The current state and prospects of geometry and nonlinear differential equations *Mathematical Research Today and Tomorrow* (1991) Springer-Verlag pages 29-39.
- [125] Y.Y. Lu and Yau, Shing-Tung, Eigenvalues of the Laplacian through Boundary Integral Equations, *SIAM Journal on Matrix Analysis and Applications*, Vol. 12, No. 3, (1991) pages 426-439.
- [126] J. Jost and Yau, Shing-Tung, Harmonic maps and group representations, *Differential Geometry*, Lawson, ed.; (1991) Longman Higher Education and Reference, publ. (Proc. of the M. do Carmo Conf.).
- [127] Yau, Shing-Tung, A Review of Complex Differential Geometry, *Proc. of the 1989 AMS Summer Research Inst., Santa Cruz, Amer. Math. Soc.*, (1991), pages 619-625.

- [128] F. Zheng and Yau, Shing-Tung, On the projective manifolds covered by Space On, Proc. of Int'l. Conf. in Memory of Prof. Hua, Vol II (1988), Springer, Berlin, (1991), pages 323-332.
- [129] B. Greene, S.-S. Roan and Yau, Shing-Tung, Geometric singularities and spectra of the Landau-Ginzburg models, Comm. Math Phys., 142 No. 2 (1991), pages 245-259.
- [130] G. Tian and Yau, Shing-Tung, Complete Kähler manifolds with zero Ricci curvature, II, Invent. Math., 106 No. 1 (1991), pages 27-60.
- [131] P. Li, A. Treibergs and Yau, Shing-Tung How to hear the volume of convex domains, Amer. Math. Soc., (1992), pages 109-117.
- [132] Y. Gao and Yau, Shing-Tung, Obstacle problem for von Karman equations, Adv. in Appl. Math., 13 No. 2 (1992), pages 123-141.
- [133] Smoller, J.; Wasserman, A.; Yau, Shing-Tung and McLeod, B. "Smooth static solutions of the Einstein-Yang-Mills equations", bull. Amer. Math. Soc. (N.S.) 27 (1992), pages 239-242.
- [134] T. Hubsch and Yau, Shing-Tung, An $SL(2, \mathbb{C})$ action on chiral rings and the mirror map, Modern Phys. Lett. A 7 (1992), no. 35, 3277-3289.
- [135] P. Li and Yau, Shing-Tung, Asymptotically flat complete Kähler manifolds, Complex Geometry, edited by Komatsu and Sakane (1992), Marcel Dekker, Inc., 131-143.
- [136] H.D. Cao and Yau, Shing-Tung, Gradient estimates, Harnack inequalities and estimates for heat kernels of the sum of squares of vector fields, Mathematics Zeit, Vol. 211, Oct., 485-504, (1992).
- [137] T. Hubsch and Yau, Shing-Tung, An $SL(2, \mathbb{C})$ Action on Certain Jacobian Rings and the Mirror Map, in Essays on Mirror Manifolds, S.-T. Yau, ed. (International Press, Hong Kong, (1992)). 92/B322.
- [138] W.M. Meeks, III and Yau, Shing-Tung, The topological uniqueness of complete minimal surfaces of finite topological type, Topology, Vol. 31 No. 2 (1992) pps 305–316.
- [139] Y.Y. Lu and Yau, Shing-Tung, Reducing the symmetric matrix eigenvalue problem to matrix multiplications, SIAM J. on Scientific and Statistical Computing, March, (1993).
- [140] *Essays on Mirror Manifolds, Yau, Shing-Tung, ed. (International Press, Hong Kong, (1992)). 92/B322.
- [141] *Chern -a Great Geometer of the Twentieth Century, Yau, Shing-Tung, ed. (International Press, Hong Kong, (1992)).
- [142] Yau, Shing-Tung, S.S. Chern, as my teacher, in Chern - a Great Geometer of the Twentieth Century, IP, (1992), 271-274.
- [143] Hubsch, Tristan and Yau, Shing-Tung, "An $SL(2, \mathbb{C})$ action on chiral rings and the mirror map". Modern Phys. Lett. A, 7 No. 35 (1992), pages 3277-3289.
- [144] Yau, Shing-Tung and F.Y. Zheng, On a borderline class of non-positively curved compact Kahler manifolds Mathematische Zeit., Vol. 212, 587-599 (1993).
- [145] J.Jost and Yau, Shing-Tung, Harmonic mappings and algebraic varieties over function fields, American Journal of Mathematics, Vol. 115 No. 6 (1993), pp. 1197-1227.
- [146] J. Jost and Yau, Shing-Tung, A Nonlinear Elliptic System for Maps from Hermitian to Riemannian Manifolds and Rigidity Theorems in Hermitian Geometry, Acta Mathematica, Vol 170 No. 2 (1993), pp. 155-180. Also Correction to Acta Mathematica, Vol 173 No. 2

(1994), 3.

- [147] F. Zheng and Yau, Shing-Tung, Remarks on certain higher dimensional quasi-Fuchsian domains, Proceedings of Symposia in Pure Mathematics, Vol. 54, (1993)Part 2, AMS, pages 629-635.
- [148] T. Hübsch and S.-T. Yau, On the Geometry of Certain Superconformal Field Theory Paradigms, Algebraic Geometry and Related Topics Proceedings of Intl Symposium, Inchoen, Korea, Feb 1992, Vol I, I.P., (1993) pp. 121-149.
- [149] Yau, Shing-Tung, Open Problems in Geometry, Proceedings of Symposia in Pure Mathematics, Vol. 54, (1993) Part 1, AMS,1-27. Also in Chern -a Great Geometer of the Twentieth Century, IP, 1992, 275-319.
- [150] P. Li and Yau, Shing-Tung, Asymptotically flat complete Kähler manifolds, Complex Geometry proceedings of the Osaka international conference, 131-144, (Marcel Dekker, Inc., (1993)).
- [151] J. Jost and Yau, Shing-Tung, Applications of quasilinear PDE to algebraic geometry and arithmetic lattices, Algebraic Geometry and Related Topics Proceedings of Intl Symposium, Inchoen, Korea, Feb 1992), Vol I, I.P., (1993)pp. 169-190.
- [152] J. Jost and Yau, Shing-Tung, Harmonic Maps and Superrigidity, Proceedings of Symposia in Pure Mathematics, Vol. 54, (1993) Part 1, AMS,pages 245-280.
- [153] Y.Y. Lu and Yau, Shing-Tung, A new approach to sparse matrix eigenvalues, Proceedings of 1993 IEEE Regional Conference on Aerospace Control System, Westlake Village, CA, May25-27, (1993).
- [154] J. Smoller, A.G. Wasserman and Yau, Shing-Tung, Existence of Black Hole Solutions of the Einstein-Yang/Mills Equations, Comm. Math. Phys. Vol. 54, No. 2, 377-402 (1993).
- [155] Yau, Shing-Tung, A splitting theorem and an algebraic geometric characterization of locally Hermitian symmetric spaces, Communications in Analysis and Geometry Vol.1 No.3, (1993) p. 473-486.
- [156] A.Klemm, B.H.Lian, S.S.Roan and Yau, Shing-Tung, A note on ODEs and mirror symmetry, Functional Analysis on the eve ofthe 21st Century, Vol. II, Progr. Math., 132, 301-323, (1993).
- [157] Hübsch, Tristan; Yau, Shing-Tung, "On the geometry of certain superconformal field theory paradigms (towards a quantum algebraic geometry)". Algebraic geometry and related topics (Inchon, 1992), 121-149, Conf. Proc. Lecture Notes Algebraic Geom., I, Internat. Press, Cambridge MA, (1993).
- [158] "Differential Geometry: Riemannian Geometry." Proceedings of the AMS summer research institute on differential geometry held at the University of California, Los Angeles, California, July 8-28 1990. Edited by Robert Greene and S.-T. Yau. Proceedings of Symposia in Pure mathematics, 54, Part 3. Amer. Math. Soc., Providence RI, (1993). xxii+710 pp. ISBN: 0-8218-1496-6.
- [159] "Differential Geometry: geometry in mathematical physics and related topics." Proceedings of the AMS summer research institute on differential geometry held at the University of California, Los Angeles, California, July 8-28 1990. Edited by Robert Greene and S.-T. Yau. Proceedings of Symposia in Pure mathematics, 54, Part 1. Amer. Math. Soc., Providence RI, (1993). xxii+560 pp. ISBN: 0-8218-1494-X.
- [160] J-P Bourguignon, P. Li and Yau, Shing-Tung, Upper bound for the first Eigenvalue of

algebraic submanifolds, *Comment. Math. Helv.* 69 (1994), no. 2, 199-207.

- [161] J. Li, Yau, Shing-Tung, F. Zheng, On projectively flat Hermitian manifolds, *Communications in Analysis and Geometry Vol.2 No.1*, (1994) pp. 103-110.
- [162] W. Shi and Yau, Shing-Tung, Harmonic maps on complete noncompact riemannian manifolds, *Discourses in Mathematics and its Applications*, No. 3 (Texas A&M (1994))pp. 79-120.
- [163] Yau, Shing-Tung, On the Harnack inequalities of partial differential equations, *Communications in Analysis and Geometry Vol.2 No.3*, (1994) pp. 431-450.
- [164] *Lectures on Differential Geometry, Yau, Shing-Tung and R. Schoen, (International Press, Boston, (1994)).
- [165] S.S.-T. Yau and S.-T. Yau, Finite dimensional filters with nonlinear drift V Duncan-Mortensen-Zakai equation with arbitrary initial condition for Kalman-Bucy filtering system and Benes filtering system (submitted).
- [166] S.S.-T. Yau and S.-T. Yau, Explicit formal solution to generalized Kolmogorov equation, Eleventh Army Conference on Applied Mathematics and Computing, ARO Rpt. 94-1. (1994).
- [167] *Lectures on Harmonic Maps, Yau, Shing-Tung and R. Schoen, eds. (International Press, Boston, (1994)).
- [168] Current developments in mathematics, 1995. Papers from the seminar held in Cambridge, MA, April 1995. Edited by Raoul Bott, Michael Hopkins, Arthur Jaffe, Isadore Singer, Daniel Stroock and Shing-Tung Yau. International Press, Cambridge, MA, (1994). ii+407 pp. ISBN 1-57146-029-200B25.
- [169] *"Perspectives in Mathematical Physics", Edited by R. Penner & Yau, Shing-Tung. Conference Proceedings and lecture notes in mathematical physics, III. (International Press, Boston, (1994)). iii+307 pp. ISBN 1-57146-009-8.
- [170] F.R.K. Chung and Yau, Shing-Tung, A Harnack inequality for homogeneous graphs and subgraphs, *CAG 2 (1994) #4*, 627-640 and also, Gokova Conference -Proceedings (the contents of the Proceedings is also published as Volume 19, No.2, 1995, Turkish Journal of Mathematics).
- [171] S. Hosono, A. Klemm, S. Theisen and Yau, Shing-Tung, Mirror Symmetry, Mirror Map and Applications to Calabi-Yau Hypersurfaces, *Comm. Math. Physics*, Vol.167 No.2 (1995)pp. 301-350.
- [172] J. Smoller, A. Wasserman and Yau, Shing-Tung, Einstein-Yang/Mills black hole solutions, *C.N.Yang, A Great Physicist of the 20th Century*, IP, 209-220, (1995).
- [173] B. H. Lian and Yau, Shing-Tung, Mirror symmetry, rational curves on algebraic manifolds and hypergeometric series, *ICMP Proceedings Paris (1994)*, 163-184, IP, 1995.
- [174] Stern, R. and Tian, Gang, "Donaldson and Yau receive Crafoord prize". *Notice Amer. Math. Soc.* 41 (1994), no. 7, 794-796.
- [175] Yau, Shing-Tung, Harnack Inequality for Non-self-adjoint Evolution Equations, *MRL*, 2, 387-399 (1995).
- [176] "Elliptic curves, modular forms & Fermat's last theorem". Proceedings of the Conference on Elliptic Curves and Modular Forms held at the Chinese University of Hong Kong, Hong Kong, December 18-21, 1993. Edited by John Coates and S.-T. Yau. Series in Number Theory, I. International Press, Cambridge MA, (1995). ii+191 pp. ISBN 1-57146-026-8.

- [177] "Surveys in differential geometry", Vol II. A supplement to the Journal of Differential Geometry. Proceedings of the Conference on Geometry and Topology held at Harvard University, Cambridge, MA, April 23-25, 1993. Edited by C.-C. Hsiung and S.-T. Yau. International Press, Boston, MA, (1995). viii+456 pp. ISBN: 1-57146-027-6.
- [178] "Chen Ning Yang, A great physicist of the twentieth century". Edited by C.S. Liu and S.-T. Yau. International Press, Cambridge MA, (1995). viii+465 pp. ISBN 1-57146-001-2.
- [179] B. H. Lian and Yau, Shing-Tung, "Integrality of Certain Exponential Series". Algebra and geometry Taipei, (1995), pages 215-227, Lect. Algebra Geom., 2, Internat. Press, Cambridge MA, 1998.
- [180] F.R. Chung and Yau, Shing-Tung, Eigenvalues of graphs and Sobolev inequalities, *Combin. Probab. Comput.* 4 (1995), no. 1, 11-25.
- [181] S. Hosono, A. Klemm, S. Theisen and Yau, Shing-Tung, Mirror Symmetry, Mirror Map and Applications to Complete intersection Calabi-Yau spaces, *Nuclear Phys. B* 433 (1995), no. 3, 501-522. ISSN 0550-3213. Also Published in *Mirror Symmetry II* (Amer. Math. Soc. Providence, RI), volume 1 of AMS/IP Stud. Adv. Math. 1997, pages 545-606.
- [182] Yau, Shing-Tung, Review on Kähler Einstein Metrics in Algebraic Geometry, *Israel Mathematical Conference Proceedings*, Vol 9, (1996).
- [183] S.S.-T. Yau and S.-T. Yau, Explicit solution of a Kolmogorov equation, *Appl. Math & Optimization*, 34, 231-266 (1996).
- [184] B. H. Lian and Yau, Shing-Tung, Arithmetic properties of mirror map and quantum coupling *CMP*, 176, 163-191 (1996).
- [185] F.R. Chung and Yau, Shing-Tung, Logarithmic Harnack inequalities, *Math. Res. Lett.* 3 (1996), no. 6, 793-812.
- [186] G. Huisken and Yau, Shing-Tung, Definition of Center of Mass for Isolated Physical Systems and Unique Foliations by Stable Spheres with Constant Mean Curvature, *Invent. Math.* 124, 281-311 (1996).
- [187] B. H. Lian and Yau, Shing-Tung, Mirror Maps, Modular Relations and Hypergeometric Series II. S-duality and mirror symmetry (Trieste, 1995) *Nuc. Phys. B Proc. Suppl.* 46 (1996), 248-262.
- [188] F.R.K. Chung, A. Grigoryan and Yau, Shing-Tung, Upper Bounds for Eigenvalues of the Discrete and Continuous Laplace operators; *Advances in Math*, Vol 117 (1996), No2. 165-178.
- [189] W.S. Shi and Yau, Shing-Tung, A Note on the Total Curvature of a Kähler Manifold ; *MRL* 3, 123-132 (1996).
- [190] Yau, Shing-Tung, An application of eigenvalue estimate to algebraic curves defined by congruence subgroups; *MRL* 3, 167-172 (1996).
- [191] Yau, Shing-Tung and Eric Zaslow, BPS States, String Duality, and Nodal Curves on K3 *Nuclear Physics B* 471 (1996) pages 503-512.
- [192] S. Hosono, B. H. Lian and Yau, Shing-Tung, GKZ-Generalized Hypergeometric Systems in Mirror Symmetry of Calabi-Yau Hypersurfaces, *Commun. Math. Phys.* 182 (1996) 535-578.
- [193] A. Strominger, Yau, Shing-Tung and E. Zaslow, Mirror Symmetry is T-Duality, *Nuclear Physics B* 479 (1996) 243-259.

- [194] Yau, Shing-Tung, An application of eigenvalue estimate to algebraic curves defined by congruence subgroups. *Math. Res. Lett.* 3 (1996), no. 2, 167–172.
- [195] F.R.K. Chung, R.L. Graham and Yau, Shing-Tung, On Sampling with Markov Chains; *Random Structures and Algorithms*, Vol.9, Nos 1 and 2, (1996), pp 55-77.
- [196] Yau, Shing-Tung, Applications of Geometric Ideas in General Relativity Black Holes and Conserved Quantity, submitted to the Proceedings of APCTP Conf., Seoul, June (1996).
- [197] Chung, F. R. K.; Graham, R. L.; Yau, S.-T., On sampling with Markov chains. *Proceedings of the Seventh International Conference on Random Structures and Algorithms* (Atlanta, GA, 1995). *Random Structures Algorithms* 9 (1996), no. 1-2, 55–77. (Reviewer Uriel G. Rothblum) 15A18 (60J15 60J20 62D05).
- [198] Yau, Shing-Tung and Eric Zaslow, BPS States as Symplectic Invariants from String Theory; *Lect Notes in Pure and App. Math.*, 184, (1997), pp. 177-186.
- [199] S. Hosono, B. H. Lian and Yau, Shing-Tung, Maximal Degeneracy Points of GKZ Systems; *J. of the AMS*, Vol 10, No 2, April (1997), pp. 427-443.
- [200] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, Mirror principle. I. *Asian J. Math.* 1 (1997), no. 4, 729–763. 14Jxx (14Dxx 14Nxx 32Jxx 57-XX 81Txx).
- [201] Jost, Jergen; Yau, Shing-Tung, Harmonic maps and superrigidity. *Tsing Hua lectures on geometry & analysis* (Hsinchu, 1990–1991), 213–246, *Internat. Press*, Cambridge, MA, (1997). 58Exx (53Cxx).
- [202] Chung, F. R. K.; Yau, S.-T., Eigenvalue inequalities for graphs and convex subgraphs. *Comm. Anal. Geom.* 5 (1997), no. 4, 575–623. (Reviewer Robert Brooks) 58G99 (05C50).
- [203] Hamilton, Richard S.; Yau, Shing-Tung, The Harnack estimate for the Ricci flow on a surface—revisited. *Asian J. Math.* 1 (1997), no. 3, 418–421. (Reviewer Emmanuel Hebey) 53C21 (35B45 35J60 58G30).
- [204] Chung, F. R. K.; Yau, S.-T., A combinatorial trace formula. *Tsing Hua lectures on geometry & analysis* (Hsinchu, 1990–1991), 107–116, *Internat. Press*, Cambridge, MA, (1997). (Reviewer Robert Brooks) 58G11.
- [205] Chung, F. R. K.; Grigoryan, A.; Yau, S.-T., Eigenvalues and diameters for manifolds and graphs. *Tsing Hua lectures on geometry & analysis* (Hsinchu, 1990–1991), 79–105, *Internat. Press*, Cambridge, MA, (1997). (Reviewer Robert Brooks) 58G99.
- [206] Yau, Shing Tung, A note on the distribution of critical points of eigenfunctions. *Tsing Hua lectures on geometry & analysis* (Hsinchu, 1990–1991), 315–317, *Internat. Press*, Cambridge, MA, (1997). (Reviewer Man Chun Leung) 58G03 (53C21).
- [207] Yau, Shing Tung, A remark on the existence of sphere with prescribed mean curvature. *Asian J. Math.* 1 (1997), no. 2, 293–294.
- [208] Yau, Shing-Tung, “A note on the distribution of critical points of eigenfunctions”. *Collection of papers on geometry, analysis and mathematical physics* (World Sci. Publishing, River Edge, NJ) (1997), pages 173-175.
- [209] Yau, Shing-Tung, “Sobolev inequality for measure space”. *Tsing Hua Lectures on geometry and analysis* (Hsinchu, 1990-1991) (*Internat. Press*, Cambridge, MA) (1997). pages 299-313.
- [210] “Mirror Symmetry II”. Edited by B. Greene and Shing-Tung Yau. *AMS/IP Studies in Advanced Mathematics*, 1. *Amer. Math. Soc.*, Providence RI; *International Press*, Cambridge MA (1997). xvi+844 pp. ISBN: 0-8218-0634-3.

- [211] Schoen, R.; Yau, S. T., Lectures on harmonic maps. Conference Proceedings and Lecture Notes in Geometry and Topology, II. International Press, Cambridge, MA, (1997). vi+394 pp. ISBN 1-57146-002-0 (Reviewer John C. Wood)58E20 (53C42).
- [212] Tsing Hua lectures on geometry & analysis. Lectures from the seminar held at Tsing Hua University, Hsinchu, 1990–1991. Edited by Shing-Tung Yau. International Press, Cambridge, MA, (1997). iv+322 pp. ISBN 1-57146-042-X pages 53-06.
- [213] Current developments in mathematics, 1996. Papers from the seminar held in Cambridge, MA, 1996. Edited by Raoul Bott, Arthur Jaffe, David Jerison, George Lusztig, Isadore Singer and Shing-Tung Yau. International Press, Cambridge, MA, (1997). iv+212 pp. ISBN 1-57146-035-7.
- [214] Yau, Shing-Tung and Hoppe, Jens. "Absence of Zero Energy States in Reduced $SU(N)3d$ Supersymmetric Yang Mills Theory"(1997)URL <http://arXiv.org/abs/hep-th/9711169>.
- [215] Yau, Shing-Tung and Stephen Yau, Existence and Decay Estimates for the Time Dependent Parabolic Equation Arisen in Filtering Problem, submitted to the Asian Journal of Mathematics.
- [216] A. Klemm, B. Lian, S.-S. Roan, and Yau, Shing-Tung, Calabi-Yau four folds for M- and F-Theory compactifications, Nuclear Phys. B 518 (1998), no. 3, 515–574. 81Txx (14Jxx 32Jxx).
- [217] Yau, Shing Tung, Stephen S. T., Finite-dimensional filters with nonlinear drift. XI. Explicit solution of the generalized Kolmogorov equation in Brockett-Mitter program. Adv. Math. 140 (1998), no. 2, 156–189. 93E11 (17B99 60G35).
- [218] J. Hoppe and Yau, Shing-Tung, Some Properties of Matrix Harmonics on S^2 , Comm. Math. Phys. 195 (1998), no. 1, 67–77. 58Gxx.
- [219] Mirror symmetry. I. Revised reprint of Essays on mirror manifolds [Internat. Press, Hong Kong, 1992; MR 94b:32001]. Edited by Shing-Tung Yau. AMS/IP Studies in Advanced Mathematics, 9. American Mathematical Society, Providence, RI; International Press, Cambridge, MA, (1998). xiv+444 pp. ISBN 0-8218-0665-3 32-06 (14-06).
- [220] Yau, Shing Tung, Stephen S. T. Finite-dimensional filters with nonlinear drift. XI. Explicit solution of the generalized Kolmogorov equation in Brockett-Mitter program. Adv. Math. 140 (1998), no. 2, 156–189. 93E11 (17B99 60G35).
- [221] "S.S. Chern, A great geometer of the twentieth century". Expanded edition. Edited by S.-T. Yau. International Press, Cambridge, MA, (1998). xxxii+331 pp. ISBN: 1-57146-098-5.
- [222] "Surveys in differential geometry", Vol III. A supplement to the Journal of Differential Geometry. Lectures on geometry and topology in honor of the 80th birth day of Chuan-Chiu Hsiung held at Harvard University, Cambridge, MA, May 3-5, 1996. Edited by C.-C. Hsiung and S.-T. Yau. International Press, Boston, MA, (1998). x+339 pp. ISBN: 1-57146-067-5.
- [223] "Mirror Symmetry I". Revised reprint of Essays on mirror manifolds [Internat. Press, Hong Kong, 1992:MR 94b:32001]. Edited by Shing-Tung Yau. AMS/IP Studies in Advanced Mathematics, 9. Amer. Math. Soc., Providence RI; International Press, Cambridge MA (1998). xiv+444 pp. ISBN: 0-8218-0665-3.
- [224] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, The Candelas-de la Ossa-Green-Parkes formula. String theory, gauge theory and quantum gravity (Trieste, 1997). Nuclear Phys. B Proc. Suppl. 67 (1998), 106– 114. 32Gxx (14Jxx 14Nxx 32Jxx).
- [225] Kashiwara, Masaki; Kawai, Takahiro and Yau, Shing-Tung, Preface. Asian J. Math. 2, No. 4 (1998), pages vii-x. ISSN 1093-6106. Mikio Sato: a great Japanese mathematician of the

twentieth century.

- [226] Lian, Bong H. and Yau, Shing-Tung, On mirror symmetry. Algebra and geometry (Taipei, 1995) (Internat. Press, Cambridge MA), volume 2 of Lect. Algebra Geom. (1998), pages 207-213.
- [227] Yau, Shing-Tung and Hoppe, Jens. "Absence of Zero Energy States in the Simplest $d=3$ ($d=5$?) Matrix Models"(1998)URL <http://arXiv.org/abs/hep-th/9806152>.
- [228] Salaff Stephen and Yau, Shing-Tung. "Ordinary differential equations". (International Press, Cambridge MA), 2nd Edition (1998). ISBN 1-57146-065-9, vi+72 pages.
- [229] Yau, Shing-Tung, Steven Yau, Existence and Decay Estimates for the Time Dependent Parabolic Equation Arisen in Filtering Problem" Asian Journal of Mathematics, vol.2.4 (1998).
- [230] A. Grigoryan and Yau, Shing-Tung, Decomposition of a metric space by capacitors, Proceeding of Symposia in Pure Mathematics 65 (1999) 39-75.
- [231] Yau, Shing-Tung. "Introduction to Enumerative Invariants", Mirror Symmetry, III (Montreal, PQ, 1995), 69-75, AMS/IP Stud. Adv. math., 10, Amer. Math. Soc., Providence, RI, (1999).
- [232] Chiang, T.M.; Klemm, A.;Yau, Shing-Tung and Zaslow, E. "Local mirror symmetry: calculations and interpretations". Adv. Theor. Math. Phys. volume 3, No 3 (1999), pages 495-565.
- [233] Current developments in mathematics, 1997. Papers from the seminar held in Cambridge, MA, 1997. Edited by Raoul Bott, Arthur Jaffe, David Jerison, George Lusztig, Isadore Singer and Shing-Tung Yau. International Press, Cambridge, MA, (1999). ii+266 pp. ISBN 1-57146-078-0.
- [234] "Mirror Symmetry III". Proceedings of the conference on complex geometry and mirror symmetry held at the University of Montreal, Montreal, PQ, 1995. Edited by Duong H. Phong, Luc Vinet and Shing-Tung Yau. AMS/IP Studies in Advanced Mathematics, 10. Amer. Math. Soc., Providence RI; Universite de Montreal, centre de Recherches Mathematiques, Montreal, QC (1999). x+312 pp. ISBN: 0-8218-1193-2.
- [235] F.R.K. Chung, Yau, Shing-Tung, "Coverings, Heat Kernels and Spanning Trees" Electornic Journal of Combinatorics, Vol. 6 (1999).
- [236] F.Finster, J.Smoller, and Yau, Shing-Tung, "Particlelike Solutions of the Einstein-Dirac-Maxwell Equations," 9802012, Phys. Lett. A 259 (1999) pages 431-436.
- [237] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, Mirror principle, a survey. Current developments in mathematics, 1998 (Cambridge, MA), 35-82, Int. Press, Somerville, MA, 1999.
- [238] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, Mirror principle. I[MR 99e:14062]. Surveys in differential geometry: differential geometry inspired by string theory (Int. Press, Boston MA), volume 5 of Surv. Differ. Geom. (1999), pages 405-454.
- [239] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, Mirror principle. II. Asian J. Math. (1999) pages 109-146.
- [240] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, Mirror principle. II[MR 2001a:14057]. Surveys in differential geometry: differential geometry inspired by string theory (Int. Press, Boston MA), volume 5 of Surv. Differ. Geom. (1999), pages 455-509.
- [241] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, Mirror principle. III. Asian J. Math. 3 (1999), no. 4, 771-800.

- [242] Lian, Bong H.; Yau, Shing-Tung, Differential equations from mirror symmetry. Surveys in differential geometry differential geometry inspired by string theory, 510–526, *Surv. Differ. Geom.*, 5, Int. Press, Boston, MA, (1999).
- [243] Witten, Edward and Yau, Shing-Tung. Connectedness of the boundary in the AdS/CFT correspondence. *Adv. Theor. Math. Phys.* volume 3, No. 6 (1999), pages 1635-1655 (2000). ISSN 1095-0761. Also published in *Mirror Symmetry IV* (American Mathematical Society/International Press, Providence, RI), volume 33 of *AMS/IP Studies in Advanced Mathematics*. ISBN 0-8218-3335-9 (2002), pages 273-287.
- [244] Yau, Shing-Tung, “Einstein manifolds with zero Ricci curvature”. *Surveys in differential geometry: essays on Einstein manifolds* (Int. Press, Boston MA), *Surv. Differ. Geom.*, VI (1999), pages 1-14.
- [245] F.Finster, J.Smoller, and Yau, Shing-Tung, “The Coupling of Gravity to Spin and Electromagnetism,” 9906032, *Mod.Phys.Lett.*14 (1999) pages 1053-1057.
- [246] Jost, Jergen; Yau, Shing-Tung, Harmonic maps and rigidity theorems for spaces of nonpositive curvature. *Comm. Anal. Geom.* 7 (1999), no. 4, 681–694.
- [247] F.Finster, J.Smoller, and Yau, Shing-Tung, “Particlelike Solutions of the Einstein-Dirac Equations,” 9801079, *Phys.Rev. D* 59(1999)104020.
- [248] F.Finster, J.Smoller, and Yau, Shing-Tung, “Non-Existence of Black Hole Solutions for a Spherically Symmetric Einstein-Dirac-Maxwell System,”9810048, *Commun. Math. Phys.* 205 (1999)pages 249-262.
- [249] “Current developments in mathematics 1998”, Proceedings of the seminar held in Cambridge, MA 1998. Edited by B. Mazur, W. Schmid, S.T. Yau, D. Jerison, I. Singer and D. Stroock. International Press, Somerville, MA, (1999). vi+278pp. ISBN: 1-57146-077-2.
- [250] “Surveys in differential geometry”, differential geometry inspired by string theory. A supplement to the *Journal of Differential Geometry*. Edited by Yau, Shing-Tung. *Surveys in Differential Geometry*, V. International Press, Boston, MA, ((1999)). viii+569 pp. ISBN: 1-57146-070-5.
- [251] Finster, Felix; Smoller, Joel; Yau, Shing-Tung, Non-existence of time-periodic solutions of the Dirac equation in a Reissner-Nordström black hole background. *J. Math. Phys.* 41 (2000), no. 4, 2173–2194.
- [252] Finster, Felix; Kamran, Niky; Smoller, Joel; Yau, Shing-Tung, Nonexistence of time-periodic solutions of the Dirac equation in an axisymmetric black hole geometry. *Comm. Pure Appl. Math.* 53 (2000), no. 7, 902–929 and Finster, Felix; Kamran, Niky; Smoller, Joel; Yau, Shing-Tung Erratum “Nonexistence of time-periodic solutions of the Dirac equation in an axisymmetric black hole geometry”. *Comm. Pure Appl. Math.* 53 (2000), no. 9, 1201.
- [253] Chung, Fan; Grigoryan, Alexander; Yau, Shing-Tung, Higher eigenvalues and isoperimetric inequalities on Riemannian manifolds and graphs. *Comm. Anal. Geom.* 8 (2000), no. 5, 969–1026.
- [254] Chung, Fan and Yau, Shing-Tung. Discrete Green’s functions, *J. Combin. Theory Ser. A* 91, No. 1-2 (2000), pages 191-214. ISSN 0097-3165. In memory of Gian-Carlo Rota.
- [255] Chung, Fan and Yau, Shing-Tung. “A Harnack inequality for Dirichlet eigenvalues”. *J. Graph Theory* 34 (2000), pages 247-257.
- [256] Finster, Felix; Smoller, Joel and Yau, Shing-Tung. “Absence of static, spherically symmetric black hole solutions for Einstein-Dirac-Yang/Mills equations with complete fermions shells”.

Adv. Theor. Math. Phys. 4 (2000), pages 1231-1257. ISSN 1095-0761.

- [257] Finster, Felix; Smoller, Joel; Yau, Shing-Tung, The interaction of Dirac particles with non-abelian gauge fields and gravity—black holes. Michigan Math. J. 47 (2000), no. 1, 199–208.
- [258] Finster, Felix; Smoller, Joel; Yau, Shing-Tung, The interaction of Dirac particles with non-abelian gauge fields and gravity—bound states. Nuclear Phys. B 584 (2000), no. 1-2, 387–414.
- [259] Finster, Felix; Smoller, Joel; Yau, Shing-Tung, Some recent progress in classical general relativity. J. Math. Phys. 41 (2000), no. 6, 3943–3963.
- [260] Frohlich, J.; Graf, G.M.; Hasler, D.; Hoppe, J. and Yau, Shing-Tung. “Asymptotic form of zero energy wave functions in supersymmetric matrix models”. Nuclear Phys. B 567 (2000), pages 231-248.
- [261] Naichung Conan Leung, Shing-Tung Yau, Eric Zaslow, “From Special Lagrangian to Hermitian-Yang-Mills via Fourier-Mukai Transform” Advanced Theoretical Math Physics Journal 4 (2000), pages 1319-1341. ISSN 1095-0761.
- [262] Lian, Bong H.; Liu, Kefeng; Yau, Shing-Tung, Mirror principle. III [MR 2002g:14080]. Surveys in differential geometry: differential geometry inspired by string theory (Int. Press, Somerville MA), Surv. Differ. Geom. VII (2000), pages 433-474.
- [263] Yau, Shing-Tung. “Open problems in geometry”. J. Ramanujan Math. Soc. 15 (2000), pages 125-134.
- [264] Yau, Shing-Tung. “Review of geometry and analysis”. Asian J. Math. 4 (2000), pages 235-278, ISSN 1093-6106. Kodaira’s issue.
- [265] Yau, Shing-Tung. “Review of geometry and analysis”. Mathematics: frontiers and perspectives (Amer. Math. Soc., Providence, RI) (2000), pages 353-401.
- [266] Yau, Shing-Tung; Yau, Stephen S.-T., Real time solution of nonlinear filtering problem without memory. I. Math. Res. Lett. 7 (2000), no. 5-6, 671–693.
- [267] Yau, Shing-Tung; Zhang, Wen, Nonlinear and linear elastic impact theory. Cathleen Morawetz: a great mathematician. Methods Appl. Anal. 7 (2000), no. 3, 591–604.
- [268] Andreas, Bjorn; Curio, Gottfried; Ruiperez, Daniel Hernandez and Yau, Shing-Tung. “Fourier-Mukai transform and Mirror Symmetry for D-branes on elliptic Calabi-Yau”. HUB-EP-00-60, (2000) URL <http://arxiv.org/math/0012196>, to appear in Comm. Math. Phys.
- [269] “Surveys in differential geometry”, Papers dedicated to Atiyah, Bott, Hirzebruch and Singer. Edited by Yau, Shing-Tung. Surveys in Differential Geometry, VII. International Press, Somerville, MA, (2000). iv+696 pp. ISBN: 1-57146-069-1.
- [270] F.Finster, N.Kamran, J.Smoller and Yau, Shing-Tung, The long time dynamics of Dirac particles in the Kerr-Newman black hole geometry (preprint) (2000)URL <http://arXiv.org/abs/math/0010064>.
- [271] Yau, Shing-Tung and Liu, Chien-Hao. “On the Splitting Type of an Equivariant Vector Bundle over a Toric Manifold” (2000) URL <http://arXiv.org/abs/math/0002031>.
- [272] Todorov, Andrey; Yau, Shing-Tung and Lian, Bong H., “Maximal Unipotent Monodromy for complete intersection CY manifolds”(2000)URL <http://arXiv.org/abs/math/0008061>.

- [273] Yau, Shing-Tung; Liu, Chien-Hao and Hu, Yi. "Toric morphisms and fibrations of toric Calabi-Yau hypersurfaces" (2000) URL <http://arXiv.org/abs/math/0010082>.
- [274] Andreas, Bjorn; Yau, Shing-Tung; Curio, Gottfried; Ruiperez, Daniel Hernandez, Fibrewise T-duality for D-branes on elliptic Calabi-Yau. *J. High Energy Phys.* (2001), no. 3, Paper 20, 13 pp.
- [275] Chen, Beifang; Yau, Shing-Tung; Yeh, Yeong-Nan, Graph homotopy and Graham homotopy. Selected papers in honor of Helge Tverberg. *Discrete Math.* 241 (2001), no. 1-3, 153–170.
- [276] Hu, Yi and Yau, Shing-Tung. "Hyper-Kähler Manifolds and Birational Transformations". (2001) URL <http://xxx.lanl.gov/math.AG/0111089>.
- [277] F. Finster, J.A. Smoller and Yau, Shing-Tung. "The Einstein-Dirac-Maxwell Equations-Black Hole Solutions". *Methods Appl. Anal.* 8 (2001), pages 623-634.
- [278] Naichung Conan Leung, Shing-Tung Yau, Eric Zaslow, "From Special Lagrangian to Hermitian-Yang-Mills via Fourier-Mukai Transform", Winter school on Mirror Symmetry, Vector Bundles and Lagrangian Submanifolds (Cambridge, MA 1999) (*Amer. Math. Soc., Providence, RI*), volume 23 of *AMS/IP Stud. Adv. Math.* (2001), pages 209-225.
- [279] Lian, Bong H.; Yau, Shing-Tung, A tour of mirror symmetry. First International Congress of Chinese Mathematicians (Beijing, 1998), 115–127, *AMS/IP Stud. Adv. Math.*, 20, *Amer. Math. Soc., Providence, RI*, (2001).
- [280] A. Strominger, Yau, Shing-Tung and E. Zaslow, Mirror Symmetry is T-Duality, Winter school on Mirror Symmetry, Vector Bundles and Lagrangian Submanifolds (Cambridge, MA 1999) (*Amer. Math. Soc., Providence, RI*), volume 23 of *AMS/IP Stud. Adv. Math.* (2001), pages 333-347.
- [281] "Current developments in mathematics 2000", Edited by B. Mazur, W. Schmid, S.T. Yau, J. de Jong, D. Jerison and G. Lustig. International Press, Somerville, MA, (2001). iv+253pp. ISBN: 1-57146-079-9.
- [282] "Winter school on Mirror Symmetry, Vector Bundles and Lagrangian Submanifolds". Proceedings of the school held at Harvard University, Cambridge MA, January' 1999. Edited by Cumrun Vafa and S.T. Yau. volume 23 of *AMS/IP Stud. Adv. Math.*, *Amer. Math. Soc., Providence, RI*; International Press, Somerville, MA (2001). x+377 pp. ISBN: 0-8218-2159-8.
- [283] "First International Congress of Chinese Mathematicians". Proceedings of the congress (ICCM98) held in Beijing, December 12–16, 1998. Edited by Lo Yang and S.-T. Yau. volume 20 of *AMS/IP Stud. Adv. Math.*, *Amer. Math. Soc., Providence, RI*; International Press, Somerville, MA (2001). 1xxvi+518 pp. ISBN: 0-8218-2652-2.
- [284] Yau, Shing-Tung. "The work of Chang-Shou Lin". First International Congress of Chinese Mathematicians (Beijing, 1998), *AMS/IP Stud. Adv. Math.* 20, *Amer. Math. Soc., Providence, RI*, (2001), pages xli-xlii.
- [285] Yau, Shing-Tung. "The work of Kefeng Liu". First International Congress of Chinese Mathematicians (Beijing, 1998), *AMS/IP Stud. Adv. Math.* 20, *Amer. Math. Soc., Providence, RI*, (2001), pages lv-lvi.
- [286] Yau, Shing-Tung, "Geometry of three manifolds and existence of Black Hole due to boundary effect". *Adv. Theor. Math. Phys.* 5 (2001), pages 755-767.
- [287] Yau, Shing-Tung; Yau, Stephen S.-T., Real-time numerical solution to

Duncan-Mortensen-Zakai equation. Foundations of computational mathematics (Oxford, 1999), 361–400, London Math. Soc. Lecture Note Ser., 284, Cambridge Univ. Press, Cambridge, (2001).

- [288] Bong H. Liang, Kefeng Liu and Yau, Shing-Tung. “A Survey of Mirror Principle”. Mirror Symmetry IV (AMS/IP Providence, RI), Volume 33 of AMS/IP Studies in Advanced Mathematics. ISBN 0-8218-3335-9 (2002), pages 3-10.
- [289] F.Finster, N.Kamran, J.Smoller and Yau, Shing-Tung, Decay rates and probability estimates Dirac particles in the Kerr-Newman black hole geometry, Comm. Math. Phys. 230 (2002), pages 201-244.
- [290] Bong H. Liang, Kefeng Liu and Yau, Shing-Tung. “Towards a mirror principle for higher genus”. Geometry and nonlinear partial differential equations (Hangzhou, 2001) (Amer. Math. Soc., Providence RI), volume 29 of AMS/IP Stud. Adv. Math. (2002), pages 77-86.
- [291] Hosono, Shinobu; Yau, Shing-Tung; Lian, Bong H. and Oguiso, Keiji. “Fourier-Mukai number of a K3 surface.”(2002)URL <http://arXiv.org/abs/math/0202014>.
- [292] Yau, Shing-Tung; Hosono, Shinobu; Oguiso, Keiji and Lian, Bong H.. “Kummer structures on a K3 surface -an old question of T. Shioda.”(2002).
- [293] Yau, Shing-Tung and Zaslow, Eric, “D-brane moduli spaces and the counting of nodal curves on K3,” Aspects of Mathematics, pages 373-380 (2002).
- [294] Gukov, Sergei; Yau, Shing-Tung and Zaslow, Eric. “Duality and Fibrations on G_2 manifolds.” Proceedings of Gokova conference, Greek (2002), URL <http://arXiv.org/abs/hep-th/0203217>.
- [295] Thomas, R.P.; Yau, Shing-Tung and Smith, I. “Symplectic conifold transitions.” (2002) URL <http://arXiv.org/abs/math/0209319>.
- [296] Yau, Shing-Tung; Finster, Felix and Smoller, Joel. “Non-Existence of black hole solutions to static, spherically symmetric Einstein-Dirac system -a critical discussion.” (2002) URL <http://arXiv.org/abs/gr-qc/0211043>.
- [297] Yau, Shing-Tung and Gu, Xianfeng, “Computing conformal structure of surfaces.”Communications in Information and Systems, 2(2):121–146, December (2002)URL <http://arXiv.org/abs/cs/0212043>.
- [298] Liu, Chien-Hao ; Liu, Kefeng and Yau, Shing-Tung, “On A-twisted moduli stack for curves from Witten’s gauges linear sigma models.” (2002) URL <http://arXiv.org/abs/math.AG/0212316>.
- [299] Yau, Shing-Tung. “A note on the topology of the boundary in the AdS/CFT correspondence” Mirror Symmetry IV (Amer. Math. Soc. Providence RI), volume 33of AMS/IP Studies in Advanced Mathematics. ISBN 0-8218-3335-9 (2002), pages 289-290.
- [300] Thomas, R.P. and Yau, Shing-Tung, “Special lagrangians, stable bundles and mean curvature flow” Communications In Analysis and Geometry 10(2002), pages 1075 URL <http://arXiv.org/abs/math/0104197>.
- [301] Yau, Shing-Tung. “Some progress in classical general relativity” Geometry and non-linear partial differential equations (Hangzhou 2001) (Amer. Math. Soc., Providence RI), volume 29 of AMS/IP Studies in Advanced Mathematics (2002), pages 191-206.
- [302] Yau, Shing-Tung; Liu, Chien-Hao; Lian, Bong H. and Liu, Kefeng. “The S^1 fixed points in Quot-schemes and mirror principle computations.” Contemp. Math. 322 (2003), pages 165-194, URL <http://arXiv.org/abs/math/0111256>.

- [303] Yi, Hu, Chien-Hao Liu and, Yau Shing Tung, Toric morphisms and fibrations of toric Calabi-Yau hypersurfaces, *Adv. Theor. Math. Phys.* 6 (2002) pages 457-505.
- [304] Yau, Shing-Tung; Hosono, Shinobu; Lian, Bong H. and Oguiso, Keiji. "Autoequivalences of Derived Category and a K3 surface and monodromy transformations." to appear in *J. Algebraic Geometry* (2003) URL <http://arXiv.org/abs/math/0201047>.
- [305] Hosono, Shinobu; Lian, Bong H.; Oguiso, Keiji and Yau, Shing-Tung. "Classification of $c=2$ rational conformal field theories via the Gauss product." *Comm. Math. Phys.* 241(2003), pages 245-286.
- [306] Hosono, Shinobu; Lian, Bong H.; Oguiso, Keiji and Yau, Shing-Tung. "Fourier-Mukai partners of a K3 surface of Picard number one." *Contemp. Math.* 322(2003), pages 43-55.
- [307] Hosono, Shinobu; Lian, Bong H.; Oguiso, Keiji and Yau, Shing-Tung, "Counting unimodular lattices in \mathbb{R}^s ."(2003)URL <http://arXiv.org/abs/math.QA/0301095>.
- [308] Yau, Shing-Tung; Liu, Chien-Hao and Lian, Bong H., "A reconstruction of Euler data." *J. Algebraic Geometry* 12(2003), pages 269-284. URL <http://arXiv.org/abs/math/0003071>.
- [309] Liu, Chiu-Chu Melissa and Yau, Shing-Tung, "Positivity of quasilocal mass", *Physical Review Letters* Volume 90, No. 23, (2003) URL <http://arXiv.org/abs/gr-qc/0303019>.
- [310] Gu, Xianfeng; Wang, Yalin; Chan, Tony F.; Thompson, Paul M. and Yau, Shing-Tung, "Brain surface conformal mapping." *Human Brain Mapping* 2003, New York Marriott Marquis Hotel, June 18-22, (2003).
- [311] Gu, Xianfeng; Wang, Yalin; Chan, Tony F.; Thompson, Paul M. and Yau, Shing-Tung, "Genus zero surface conformal mapping and its application to brain surface mapping," March (2003), UCLA CAM Report 03-13. *Information Processing in Medical Images*, 2003.
- [312] Liu, Kefeng, Todorov Andrey and Yau, Shing Tung, Shafarevich's Conjecture for Calabi-Yau Manifolds I, (2004) <http://arXiv.org/abs/math.AG/0308209>.
- [313] Finster, Felix, Kamran Niky, Smoller, Joel, and Yau, Shing Tung, An Integral Spectral Representation of the Propagator for the Wave Equation in the Kerr Geometry, (2004) <http://arXiv.org/abs/gr-gc/0310024>.
- [314] Liu, Chien-Hao, Liu, Kefeng, and Yau, Shing Tung, \mathbb{S}^1 -fixed points in hyper Quot-schemes and an exact mirror formula for flag manifolds from the extended mirror principle diagram (2004) <http://arXiv.org/abs/math.AG/0401367>.
- [315] Liu, Kefeng, Sun, Xiaofeng, and Yau, Shing Tung, Canonical Metrics on the Moduli Space of Riemann Surfaces I (2004) <http://arXiv.org/abs/math.DG/0403068>.
- [316] Loftin, John, Yau, Shing Tung, and Zaslow, Eric. Affine manifolds, SYZ Geometry, and the "Y" Vertex, (2004) <http://arXiv.org/abs/matg.DG/0405061>.
- [317] Yamaguchi, Satoshi and Yau, Shing Tung, Topological String Partition Functions as Polynomials (2004) <http://arXiv.org/phys/hep-th/0406078>.
- [318] Liu, Chien-Hao and Yau, Shing Tung, A Degeneration Formula of Gromov-Witten Invariants with Respect to a Curve Class for degeneration from Blow-Ups (2004) <http://arXiv.org/math.AG/0408147>.
- [319] Liu, Kefeng, Sun, Xiaofeng, and Yau, Shing Tung, Canonical Metrics on the Moduli Space of Riemann Surfaces II, (2004), <http://arXiv.org/math.DG/0409220>.
- [320] Liu, Chien-Hao and Yau, Shing Tung, Extracting Gromov-Witten Invariants of a Conifold from Semi-Stable reduction and Relative Gromov-Witten Invariants of Pairs, (2004) <http://arXiv.org/math.AG/0411038>.