

A list of my publications

By Qing-Ming Cheng

Books:

1. 線形代数学大全
石川 晋・成 慶明, 日本評論社
第1部 とことんわかる線形代数学の基礎理論, 2008年
第2部 じっくりまなぶ線形空間論, 2008年
第3部 展望につながる線形代数学の発展理論, 2008年
2. 曲面の微分幾何学——局所理論から大域理論へ, 塩濱勝博・成 慶明, 日本評論社, 2006年
3. 線形代数学入門,
石川 晋・成 慶明, 丸善出版, 2006年
4. Differential Geometry (JMM. No. 3), Qing-Ming Cheng, 2001

Papers:

1. (With Z. Li and G. Wei) A classification of complete 3-dimensional self-shrinkers in the Euclidean space \mathbb{R}^4 , *Sci. China Math.*, 67(2024), 873-882. Doi:10.1007/s11425-022-2121-7
2. (With J. Lai and G. Wei) Examples of compact embedded convex λ -hypersurfaces, **J. Funct. Anal.** 286(2024), Art. 110211: 1-12. DOI:10.1016/j.jfa.2023.110211
3. (With G. Wei) Complete hypersurfaces with w -constant mean curvature in the unit spheres, **Trans. Amer. Math. Soc.**, 377 (2024), 887-904. DOI:10.1090/tran/9076
4. (With H. Hori and G. Wei), Complete Lagrangian self-shrinkers in R^4 , **Math. Z.** 301 (2022), 3417-3468. doi.org/10.1007/s00209-022-03027-2
5. (with G. Wei) Stability and area growth of λ -hypersurfaces, **Comm. Analy. Geom.**, 30 (2022), 1059-1091.
6. (With G. Wei) Complete λ -hypersurfaces in Euclidean spaces, *Chin. Ann. Math. Ser. B*, 43(5) (2022), 877-892 DOI:10.1007/s11401-022-0365-y
7. (With G. Wei and W. Yano), The second gap on complete self-shrinkers, **Proc. Amer. Math. Soc.** 151 (2022), 339-348. doi.org/10.1090/proc/16107
8. (With D. Chen and H. Li) Faber-Krahn inequalities for the Robin Laplacian on bounded domain in Riemannian manifolds, *J. Diff. Eqn.*, 336(2022), 374-386. www.elsevier.com/locate/jde
9. (With Z. Li and G. Wei) Complete self-shrinkers with constant norm of the second fundamental form, **Math. Z.**, 300 (2022), 995-1018. doi.org/10.1007/s00209-021-02831-6
10. (With G. Wei and Y. Zheng) Area of minimal hypersurfaces in the unit sphere, **Asian J. Math.**, 25(2021), 183-194. Doi:10.4310/AJM.2021.v25.n2.a2

11. (With G. Wei) Complete λ -surfaces in R^3 , *Calculus of Variations and PDEs*, 60(2021), 300 Art 46: 1-19, DOI: 10.1007/s00526-021-01920-y.
12. (with G. Wei), Examples of compact λ -hypersurfaces in Euclidean spaces, *Sci. China Math.*, 64 (2021), 155-166. doi.org/10.1007/s11425-018-9464-7
13. (with G. Wei) Complete self-shrinkers of mean curvature flow, *Proceedings of ICCM 2018*, (2020), pp.179-196.
14. (with G. Wei), Geometry of complete λ -hypersurfaces (in Chinese), *Sci. Sin. Math.* 48(2018), 699-710, doi:10.1360/N012017-00205.
15. (with G. Wei) Complete λ -hypersurfaces of weighted volume-preserving mean curvature flow, *Calc. Var. PDEs*, 57(2018), Art 32:1-21, DOI 10.1007/s00526-018-1303-4.
16. (with X. Qi, Q. Wang and C. Xia), Inequalities for eigenvalues of the buckling problem of arbitrary order, *Annali di Matematica Pura ed Applicata*, 197(2018), 211-232, DOI 10.1007/s10231-017-0676-x
17. (with D. Chen) Estimates for the first eigenvalue of Jacobi operator on hypersurfaces with constant mean curvature in spheres, *Calc. Var. PDEs*, 56(2017), 50:1-12, DOI 10.1007/s00526-017-1132-x.
18. Universal estimates for eigenvalues and applications, *Proceedings of the 6th International Congress of Chinese Mathematicians*, **ALM 37**, pp. 37-52, Higher Education Press and International Press, MA, 2017.
19. (with S. Ogata) 2-dimensional complete self-shrinkers in R^3 , *Math. Z.*, DOI 10.1007/s00209-016-1665-2, 284 (2016), 537-542.
20. (with S. Ogata and G. Wei) Rigidity theorems of λ -hypersurfaces, *Comm. Analy. Geom.*, 24(2016), 45-58
21. Critical Points of the Weighted Area Functional, **Geometry and Topology of Manifolds, Springer Proceedings in Math. & Stat.** 154, pp. 81-96, DOI 10.1007/978-4-431-56021-0-4, 2016.
22. (with G. Wei) A gap theorem of self-shrinkers, *Trans. Amer. Math. Soc.*, 367(2015), 4895-4915.
23. (with Y. Peng), Complete self-shrinkers of the mean curvature flow, *Calculus of Variations and PDEs.*, DOI 10.1007/s00526-014-0720-2, 52(2015), 497-506.
24. Estimates for eigenvalues of the Paneitz operator, *J. Diff. Eqns.*, 257(2014), 3868-3886.
25. (With H. Li and G. Wei) The stability index of hypersurfaces with constant scalar curvature in spheres, *Proc. Royal Soc. Edinburgh*, 144A (2014), 447-453,
26. (with Y. Peng), Self-shrinkers of the mean curvature flow, **Proceedings of the workshop on differential geometry of submanifolds and its related topics**, World Sci. 2013, pp. 147-163.

27. (with Y. Peng), Estimates for eigenvalues of \mathfrak{L} operator on self-shrinkers, **Comm. Contemporary Math.**, 15(2013), 1350011-1-1350011-23.
28. (With H. Sun, G. Wei and L. Zeng) Estimates for lower bounds of eigenvalues of the poly-Laplacian and quadratic polynomial operator of the Laplacian, **Proc. Royal Soc. Edinburgh**, 143A(2013), 1147-1162.
29. (with G. Wei) Upper and lower bounds for eigenvalues of the clamped plate problem, **J. Diff. Eqns.**, 255(2013), 220-233.
30. (with Xuerong Qi and Guoxin Wei), A lower bound for eigenvalues of the poly-Laplacian with arbitrary order **Pacific J. Math.**, 262(2013), 35-47.
31. (with Xuerong Qi) Eigenvalues of the Laplacian on Riemannian manifolds, **International J. Math.**, 23(2012), No.7, 1250067-1-1250067-20.
32. (with Hongcang Yang) Universal bounds for eigenvalues of a buckling problem II, **Trans. Amer. Math. Soc.**, 364(2012), 6139-6158
33. (With D. Chen, Q. Wang and C. Xia) On eigenvalues of a system of elliptic equations and of the biharmonic operator, **J. Math. Anal. Appl.**, 387(2012), 1146-1159
34. (with G. Wei) A lower bound for eigenvalues of a clamped plate problem, **Calculus of Variations and PDEs**, 42(2011), 579-590
35. (with Hongcang Yang) Universal inequalities for eigenvalues of a clamped plate problem on a hyperbolic space, **Proc. Amer. Math. Soc.**, 139 (2011), 461-471.
36. (with H. Li and G. Wei) Embedded hypersurfaces with constant m th mean curvature in a unit sphere, **Comm. Contemporary Math.**, 12(2010), 997-1013
37. (With H. Li and G. Wei) On some rigidity results of hypersurfaces in a sphere, **Proc. Royal Soc. Edinburgh**, 140A (2010), 477-493,
38. (with X. Li and X. Qi) A classification of hypersurfaces with parallel para-Blaschke tensor in S^{m+1} **International J. Math.**, 21(2010), 297-316.
39. (with G. Huang and G. Wei) Estimates for lower order eigenvalues of a clamped plate problem, **Calculus of Variations and PDEs**, 38(2010), 409-416.
40. (with Takamichi Ichikawa and Shinji Mametsuka) Estimates for eigenvalues of a clamped plate problem on Riemannian manifolds, **J. Math. Soc. Japan**, 62(2010), 673-686
41. (with Hongcang Yang) Estimates for eigenvalues on Riemannian manifolds, **J. Diff. Eqns.** 47(2009), 2270-2281
42. (with Takamichi Ichikawa and Shinji Mametsuka) Estimates for eigenvalues of the poly-Laplacian with any order in a unit sphere, **Calculus of Variations and PDEs**, 36(2009), 507-523.
43. (with Takamichi Ichikawa and Shinji Mametsuka) Inequalities for eigenvalues of Laplacian with any order, **Comm. Contemporary Math.**, 11(2009), 639-655

44. (With Yujun He and Haizhong Li) Scalar curvature of hypersurfaces with constant mean curvature in a sphere, **Glasg. Math. J.**, 51(2009), 413-423
45. (with Hongcang Yang) Universal inequalities for eigenvalues of a system of elliptic equations, **Proc. Royal Soc. Edinburgh**, 139A (2009), 273-285,
46. (with Young Jin Suh) Complete harmonic stable minimal hypersurfaces in a Riemannian manifold, **Mh. Math.**, 154(2008), 121-134.
47. First eigenvalue of Jacobi operator of hypersurfaces with constant Scalar curvature, **Proc. Amer. Math. Soc.**, 136(2008), 3309-3318.
48. (with Daguang Chen) Extrinsic estimates for eigenvalues of the Laplace operator, **J. Math. Soc. Japan** 60(2008), 325-339
49. (with Hejun Sun and Hongcang Yang) Lower order eigenvalues of Dirichlet Laplacian, **Manuscripta Math.**, 152(2008), 139-156
50. (with Hongcang Yang) Bounds on eigenvalues of Dirichlet Laplacian, **Math. Ann.**, 337(2007), 159-175
51. (with Shichang Shu) A Möbius characterization of submanifolds, **J. Math. Soc. Japan**, 58(2006), 904-925
52. (with Hongcang Yang) Inequalities for eigenvalues of Laplacian on domains and compact complex hypersurfaces in complex projective spaces, **J. Math. Soc. Japan**, 58(2006), 545-561
53. (with Hongcang Yang) Inequalities for eigenvalues of a clamped plate problem, **Trans. Amer. Math. Soc.**, 358(2006), 2625-2635
54. (with Hongcang Yang) Universal bounds for eigenvalues of a buckling problem, **Comm. Math. Phys.**, 262(2006), 663-675
55. (with Y. J. Suh) Maximal space-like hypersurfaces in $H_1^4(-1)$ with zero Gauss-Kronecker curvature, **J. Korean Math. Soc.**, 43(2006), 147-157
56. (with S. C. Shu and Y. J. Suh) Compact hypersurfaces in a unit sphere, **Proc. Royal Soc. Edinburgh**, 135A(2005), 1129-1137
57. (with Hongcang Yang) Estimates on eigenvalues of Laplacian, **Math. Ann.**, 331(2005), 445-460
58. Curvatures of complete hypersurfaces in space forms, **Proc. Royal Society Edinburgh**, 134 A (2004), 55-68.
59. Spherical rigidities of submanifolds in Euclidean spaces, **J. Math. Soc. Japan**, 56(2004), 475-487.
60. (with J.O. Baek, Y.J. Suh) Complete space-like hypersurfaces in locally symmetric Lorentz spaces, **J. Geom. Phys.**, 49(2004), 231-247

61. Compact hypersurfaces in a unit sphere with infinite fundamental group, **Pacific J. Math.**, 212(2003), 49-56
62. Complete hypersurfaces in a Euclidean space \mathbf{R}^{n+1} with constant scalar curvature, **Indiana Univ. Math. J.**, 51(2002), 53-68
63. Submanifolds with constant scalar curvature, **Proc. Royal Soc. Edinburgh**, 132A(2002), 1163-1183
64. (with S. Ishikawa and K. Shiohama) Erratum to conformally flat 3-manifolds with constant scalar curvature, **J. Math. Soc. Japan**, 54(2002), 997-1000
65. Hypersurfaces in a unit sphere with constant scalar curvature, **J. London Math. Soc.**, 64(2001), 755-768
66. Compact locally conformally flat Riemannian manifolds, **Bull. London Math. Soc.**, 33(2001), 459-465
67. (with K. Nonaka) Complete submanifolds in Euclidean spaces with parallel mean curvature vector, **Manuscripta Math.**, 105(2001), 353-366
68. (with S. Ishikawa and K. Shiohama) Conformally flat 3-manifolds with constant scalar curvature II, **Japanese J. Math.**, 27(2001), 387-404
69. Complete maximal spacelike surfaces in an anti-de Sitter space $H_2^4(c)$, **Glasgow Math. Jour.**, 42(2000), 139-156
70. (with S. Ishikawa) A Characterization of the Clifford torus, **Proc. Amer. Math. Soc.**, 127(1999), 819-828
71. (with S. Ishikawa and K. Shiohama) Conformally flat 3-manifolds with constant scalar curvature, **J. Math. Soc. Japan**, 51(1999), 207-226.
72. (with H. C. Yang) Chern's Conjecture on minimal hypersurfaces, **Math. Z.**, 227(1998), 377-390
73. (with S. Ishikawa) Space like hypersurfaces in de Sitter spaces with constant scalar curvature, **Manuscripta Math.**, 95(1998),499-505
74. (with Y. Machigashira and Y. Sugioka) The relation between degree and dilation of continuous maps, **Japanese Math. Jour.**, 24(1998),183-190
75. (with K. Shiohama) Nonexistence of integral currents II, **Kyushu J. Math.** 51(1997), 149-164
76. (with S. Ishikawa) Complete maximal spacelike submanifolds, **Kodai Math. Jour.**, 20(1997),208-217
77. The rigidity of Clifford torus $S^1(\sqrt{\frac{1}{n}}) \times S^{n-1}(\sqrt{\frac{n-1}{n}})$, **Comment. Math. Helv.**, 71(1996), 60-69
78. Nonexistence of integral currents, **Ann. of Global Analysis and Geometry**, 13 (1995), 197-205

79. Stable complete and noncompact hypersurfaces with constant mean curvature, **Kyushu J. Math.**, 49(1995), 56-66
80. Complete maximal spacelike hypersurfaces of $H_1^4(c)$, **Manuscripta Math.**, 82 (1994), 149-160
81. Hypersurfaces of a Lorentz space form, **Arch. Math.**, 63 (1994), 271-281
82. (with H. C. Yang) An estimates of the pinching constant of minimal hypersurfaces with constant scalar curvature in unit sphere, **Manuscripta Math.**, 84 (1994), 89-100
83. (with X. R. Wan) Complete hypersurfaces of space form R^4 with constant mean curvature, **Mh. Math.**, 118(1994), 171-204
84. Space-like surfaces of an anti-de Sitter space **Colloqu. Math.**, 56 (1994), 101-108
85. A characterization of complete Riemannian manifolds minimally immersed in the unit sphere, **Nagoya Math. J.**, 131 (1993), 127-133
86. A characterization of compact minimal hypersurfaces of in a unit sphere, **Bull. Austral. Math. Soc.**, 49 (1993), 223-226
87. The classification of complete hypersurfaces with constant mean curvature of space form of dimension 4, **Mem. Fac. Sci. Kyushu Univ. Ser. A**, 47 (1993), 79-101 and 48(1994) 441
88. Hypersurfaces of $S^4(1)$ with constant quasi-Gauss-Kronecker curvature, **Chinese Adv. Math.**, 22 (1993), 125-131
89. (with S. Choi) Complete space-like submanifolds with parallel mean curvature vector of an indefinite space form, **Tsukuba J. Math.**, 17(1993), 497-512
90. Complete totally real minimal submanifolds in a complex projective space, **Mem. Fac. Sci. Kyushu Univ. Ser. A**, 3 (1992), 93-103
91. (with B. Jiang) 3-dimensional submanifolds of spheres with constant mean curvature, **Tsukuba J. Math.**, 16 (1992), 321-334
92. (with R. Aiyama) Complete space-like hypersurfaces in a Lorentz space form of dimension 4, **Kodai J. Math.**, 15 (1992), 375-386
93. (with B. Q. Wu) The generalized maximum principle and conformally flat spaces, **Northeastern J. Math.**, 7 (1992), 53-57
94. Submanifolds with parallel mean curvature vector in a sphere, **J. Northeast Univ. Tech.**, 13(1992), 193-199
95. (with X. Wang) Estimates of eigenvalues of elliptic operators, **J. Northeast Univ. Tech.**, 13(1992), 306-312
96. Complete hypersurfaces in a 4-dimensional unit sphere with constant mean curvature, **Yokohama Math. J.**, 39(1992), 125-139

97. Minimal immersed submanifolds in spheres, **J. Northeast Univ. Tech.** , 12(1992), 74-78
98. Complete spacelike hypersurfaces of Lorents space, **Chinese Quaterly J. Math.**, 6(1991) 1-5.
99. (with H. F. Sun) Minimal hypersurfaces in a sphere, **J. Northeast Univ. Tech.**, 12(1991), 206-212
100. Complete space-like submanifolds in a de Sitter space with parallel mean curvature, **Math. Z.**, 206 (1991), 333-339
101. (with H. C. Yang) A note on the pinching constant of minimal hypersurfaces with constant scalar curvature in the unit sphere, **Chinese Sci. Bull.**, 36 (1991), 1-6
102. (with Y. H. Cui and Y. Q. Li) Complete hypersurfaces with constant mean curvature in space form of quasi-constant curvature, **Chinese Quarterly J. Math.**, 6(1991) 324-329
103. Complete minimal hypersurfaces in $S^4(1)$ with constant scalar curvature, **Osaka J. Math.**, 27 (1990), 885-892
104. (with H. Nakagawa) Totally umbilical hypersurfaces, **Hiroshima J. Math.**, 20 (1990), 1-10
105. Complete space-like hypersurfaces in a de Sitter space with $r=kH$, **Mem. Fac. Sci. Kyushu Univ.** Ser. A, 44 (1990), 67-77
106. Complete space-like hypersurfaces of a de Sitter space with constant mean curvature, **Tsukuba J. Math.**, 14 (1990), 353-370
107. Eigenvalues and eigenfunctions in quasi-Einsteinian manafolds, **J. Northeast Univ. Tech.**, 11(1990), 75-80
108. Properties of hypersurfaces in quasi-Einsteinian manifolds, **Chinese Quarterly J. Math.**, 5(1990), 109-110
109. Complete hypersurface minimally immersed in a unit sphere, **Mem. Fac. Sci. Kyushu Univ.**, Ser. A, 43 (1989), 7-13
110. (with Y.D.Wang) Complete Riemannian manifolds minimally immersed in $S^{n+p}(1)$, **Tsukuba J. Math.**, 10 (1989), 107-112
111. Eigenvalues and eigenfunctions of the Laplacian on a Riemannian manifold, **J. North-east Univ. Tech.**, 8(1987), 520-526

Proceedings:

1. Topology and geometry of complete submanifolds in Euclidean spaces, Proceedings of PDEs, Submanifolds and Affine Differential Geometry, Banach Center Publications Vol 69 (2005), 67-80.
2. Complete submanifolds in Euclidean spaces, Proceeding of the seventh International Workshop on Differential Geometry, Kyungpook National University, Korea, 7(2003), 17-27
3. Complete submanifolds in Euclidean spaces with constant scalar curvature, Differential Geometry and Related Topics, Proceedings of the International Conference on Modern Mathematics and the International Symposium on Differential Geometry in Honour of Professor Su Buchin on the Centenary of His Birth, World Scientific, 2002, pp. 48-63.
4. Complete submanifolds in spheres, Josai Math. Monograph 3(2001), 115-124
5. Hypersurfaces in Euclidean spaces, Proceedings of The Fifth Pacific Rim Geometry Conference, Tohoku Univ. Sendai, Japan Tohoku Math. Oubl 20(2001), 33-42
6. Minimal hypersurfaces in a sphere, Proceeding of the First International Workshop on Differential Geometry, Kyungpook National University, Korea, December 1996, p.79-98
7. (with X. R. Wan) Hypersurfaces of space form $M^4(c)$ with constant mean curvature, Lecture notes 2, First MSJ International Research Institute on Geometry and Global Analysis, Japan 1993, 327-347