

参考文献

- [Ba] T. Banchoff, Triple points and surgery of immersed surfaces, Proc. Amer. Math. Soc. **46** (1974) 407–413.
- [Bl] W. Blaschke, Vorlesungen über Differentialgeometrie, III, Springer, Berlin, 1929.
- [Bo] W. Boy, Über die Curvatura integra und die Topologie geschlossener Flächen, Math. Ann. **57** (1903) 151–184.
- [Br1] R. Bryant, A duality theorem for Willmore surfaces, J. Differential Geom. **20** (1984) 23–53.
- [Br2] R. Bryant, Surfaces in conformal geometry, Proc. Symp. Pure Math. **48** (1988) 227–240.
- [Chen1] B.-Y. Chen, On a theorem of Fenchel-Borsuk-Willmore-Chern-Lashof, Math. Ann. **194** (1971) 19–26.
- [Chen2] B.-Y. Chen, On a variational problem on hypersurfaces, J. London Math. Soc. (2) **6** (1972/1973) 321–325.
- [Chen3] B.-Y. Chen, An invariant of conformal mappings, Proc. Amer. Math. Soc. **40** (1973) 563–564.
- [Chen4] B.-Y. Chen, On the total curvature of immersed manifolds, III: Surfaces in Euclidean 4-space, Amer. J. Math. **95** (1973) 636–642.
- [Chen5] B.-Y. Chen, Geometry of submanifolds, Marcel Dekker, New York, 1973.
- [Cheng] S.-Y. Cheng, Eigenfunctions and nodal sets, Comment. Math. Helv. **51** (1976) 43–55.
- [K1] R. Kusner, Conformal geometry and complete minimal surfaces, Bull. Amer. Math. Soc. **17** (1987) 291–295.
- [K2] R. Kusner, Comparison surfaces for the Willmore problem, Pacific J. Math. **138** (1989) 317–345.

- [KPS] H. Karcher, U. Pinkall and I. Sterling, New minimal surfaces in S^3 , *J. Differential Geom.* **28** (1988) 169–185.
- [L1] H. B. Lawson, Local rigidity theorems for minimal hypersurfaces, *Ann. of Math.* **89** (1969) 187–197.
- [L2] H. B. Lawson, Complete minimal surfaces in S^3 , *Ann. of Math.* **92** (1970) 335–374.
- [LR] R. Langevin and H. Rosenberg, On curvature integrals and knots, *Topology* **15** (1976) 405–416.
- [LS1] J. Langer and D. Singer, Curves in the hyperbolic plane and mean curvature of tori in \mathbf{R}^3 and S^3 , *Bull. London Math. Soc.* **16** (1984) 531–534.
- [LS2] J. Langer and D. Singer, Curve-straightening in Riemannian manifolds, *Ann. Global Anal. Geom.* **5** (1987) 133–150.
- [LY] P. Li and S.-T. Yau, A new conformal invariant and its application to the Willmore conjecture and first eigenvalues of compact surfaces, *Invent. Math.* **69** (1982) 269–291.
- [MR] S. Montiel and A. Ros, Minimal immersions of surfaces by the first eigenfunctions and conformal area, *Invent. Math.* **83** (1986) 153–166.
- [P1] U. Pinkall, Hopf tori in S^3 , *Invent. Math.* **81** (1985) 379–386.
- [P2] U. Pinkall, Inequalities of Willmore type for submanifolds, *Math. Z.* **193** (1986) 241–246.
- [PS] U. Pinkall and I. Sterling, Willmore surfaces, *Math. Intelligencer* **9** (1987) 38–43.
- [R] A. Ros, The Willmore conjecture in the real projective space, *Math. Res. Let.* **6** (1999) 487–493.
- [Sc] M. U. Schmidt, A proof of the Willmore conjecture, preprint (math.DG/0203224).
- [SY] R. Schoen and S.-T. Yau, *Lectures on Differential Geometry*, International Press, 1994.

- [ST] K. Shiohama and R. Takagi, A characterization of a standard torus in E^3 , *J. Differential Geom.* **4** (1970) 477–485.
- [Si1] L. Simon, Existence of Willmore surfaces, *Proc. Centre for Math. Anal.* **10** (1985) 187–216.
- [Si2] L. Simon, Existence of surfaces minimizing the Willmore functional, *Commun. in Anal. and Geom.* **1** (1993) 281–326.
- [T] G. Thomsen, Über Konforme Geometrie I: Grundlagen der konformen flächentheorie, *Abh. Math. Sem. Hamburg*, (1923) 31–56.
- [We] J. L. Weiner, On a problem of Chen, Willmore et alia, *Indiana University Math. J.* **27** (1978) 19–35.
- [Wh] J. H. White, A global invariant of conformal mappings in space, *Proc. Amer. Math. Soc.* **38** (1973) 162–164.
- [Wi1] T. J. Willmore, Note on embedded surfaces, *Ann. Sti. Univ. Iasi, Ia. Mat.* (1965) 493–496.
- [Wi2] T. J. Willmore, Mean curvature of immersed surfaces, *Ann. Sti. Univ. Iasi, Ia. Mat.* (1968) 99–103.
- [Wi3] T. J. Willmore, Mean curvature of Riemannian immersions, *J. London Math. Soc.* (2) **3** (1971) 307–310.
- [Wi4] T. J. Willmore, *Riemannian Geometry*, Oxford University Press, 1993.

〒 860-8555 熊本市黒髪 2-39-1

熊本大学理学部数理科学科

E-mail address: ando@math.sci.kumamoto-u.ac.jp