

Curriculum Vitae

of

Prof. Dr. Haizhong Li

1. Personal Data and Education

- Name: **Li**
- First name: **Haizhong**
- Date of birth: **March 28, 1963**
- Place of birth: (Shaanxi, China)
- Nationality: Chinese
- Sex: Male
- Marital status: Married
- Present position: full Professor
- Permanent address:
Department of Mathematical Sciences
Tsinghua University
Beijing, 100084
People's Republic of China
Email: hli@math.tsinghua.edu.cn
Homepage: <http://www.math.tsinghua.edu.cn/faculty/~hli>
- Ph. D. Mathematics, March of 1993, Novi Sad University of Yugoslavia and University of Sarajevo
- M.S. Mathematics, July of 1986, Zhengzhou University of China
- B.S. Mathematics, July of 1983, Shaanxi University of Technology

2. Professional employment and work experience

- 2008- , Editor of Results in Mathematics
- 2004-2010 , Editor of Tsinghua Science and Technology
- 2000- , Editor of Acta Mathematica Sinica (Chinese version)
- January of 2009–December of 2012, regular member of ICTP, Italy
- July-August of 2006, visiting professor in University of New Hampshire, USA

- July of 2004, visiting professor in Sao Paulo university in Brazil
- July of 2001- December of 2002, the Alexander Humboldt Fellow, TU Berlin
- September of 1999-June of 2000, Harvard university, visiting Scholar
- July of 2000, Temple university, visiting professor
- August of 1998 - Now, Tsinghua University, Full Professor
- September of 1995-July of 1998, Tsinghua University, Associate Professor
- 1993- July of 1995, Postdoctoral Fellow, Institute of Mathematics, Academia Sinica
- 1990-1993, Ph D. , institute of Mathematics, Novi Sad University, Yugoslavia
- 1986-1990, Zhengzhou University, Assistant Lecturer, Lecturer

3. Research Grants

- Jan.2010—Dec. 2012, NSFC No. 10971110, 240000 Yuan
- Jan.2006—Dec. 2009, NSFC No. 10531090, 160000 Yuan
- Jan.2002—Dec. 2005, NSFC No. 10131020, 150000 Yuan
- Jan.2007—Dec. 2009, Ph.D. Programme of Ministry of Education, 50000 Yuan
- Jan.1998—Dec. 2000, NSFC No. 19701017, 50000 Yuan

4. Research Areas and Problems Concerned

- Geometry of submanifolds
- Variational problems in Riemannian submanifolds
- Curvature variational problems in Riemannian geometry
- Willmore surfaces and Willmore submanifolds
- Hypersurfaces with constant r -th anisotropic mean curvature
- Affine differential geometry
- AMS Subject Classification: Primary 53; Secondary 52, 58.

5. Invited Lectures recently

[1] February of 2009: Variational problems in geometry of submanifolds, Institute of Math., Tsukuba University, Feb 14-17, Tsukuba, Japan.

[2] February of 2009: Gauss-Bonnet -Grottemeyer Theorem in spaces of constant curvature, Institute of Math., Tohoku University, Feb 9-12 Sendai, Japan.

[3] January of 2009: Variational problems in geometry of submanifolds, Chuo University, January 25-Feb 14, Tokyo, Japan.

[4] January of 2009: Willmore submanifolds in a Riemannian manifold, Osaka City University, January 28-Feb 1 Osaka, Japan.

- [5] September of 2008: title "Variational problems for submanifolds", Workshop on Differential Geometry in Peking University, Beijing, China.
- [6] August of 2008: title "Willmore submanifolds in Riemannian manifolds", Taiwan National University, Taipei.
- [7] July of 2008: title "Variational problems for submanifolds in Riemannian manifolds", National Tsinghua University, Hsichu, Taipei.
- [8] June of 2008: title "On locally strongly convex affine hypersurfaces with parallel cubic form", in "Differential Geometry", June 22-28, 2008, Bedlewo Poland, invited lecture.
- [9] January of 2008: title "Variational problems in geometry of submanifolds", in "the 3rd Geometry Conference for Friendship of Japan and China", January 26-29, 2008, Nagoya University, Japan, invited lecture.
- [10] November of 2007: title "The uniqueness theorems for hypersurfaces in the Euclidean space", November 23, 2007, Peking University.
- [11] August of 2007: title "Variational problems in geometry of submanifolds" in "the 10th international conference of Differential Geometry and its Applications", Olomouc of Czech Republic, August 27-31, 2007, Olomouc, Plenary talk in Section A.
- [12] August of 2007: title "The Gauss-Bonnet-Grotemeyer Theorem in spaces of constant curvature", in TU Berlin, August 22, 2007.
- [13] July of 2007: title "r-minimal submanifolds in space forms" in "Symposium on the differential geometry of submanifolds", Valenciennes University of France, July 3 to 7, 2007, invited lecture.
- [14] April of 2007: title "Variational problems in geometry of submanifolds I", Chinese Academy of Sciences, April 12, 2007.
- [15] November of 2006: title "Willmore submanifolds in Riemannian manifolds", in "the 11th International Workshop on Differential Geometry", November 9-11, 2006, Kyungpook National University, Taegu, Korea.
- [16] September of 2006: title "Cheng-Yau operator and its applications to submanifolds", in North-eastern University, September 17, 2006, Shenyang.
- [17] March of 2006: title "Variational problems for submanifolds", in Capital Normal University, March 9, 2006, Beijing.
- [18] January of 2006: title "Lectures on Differential Geometry", in Saga University, January 12-21, 2006, Japan.
- [19] December of 2005: title "Willmore submanifolds in a Riemannian manifold", in "the 1st Geometry Conference for Friendship of Japan and China", December 19-23, 2006, Fukuoka, Japan.
- [20] July of 2004: title "Willmore submanifolds in a Riemannian manifold", in "the 13th International Differential Geometry in Brazil", July 26-30, 2004, Sao Paulo University, Brazil, Plenary lecture.

- [21] September of 2003: title “Variational problems in affine differential geometry and PDEs”, in ”Affine Geometry, Submanifolds and PDES”, September 22-28, 2003, Bedlewo Poland, invited lecture.
- [22] November of 2002: title “Willmore submanifolds in a sphere”, in department of geometry and topology of Granada University, Spain, November 9 to 16, 2002, invited lecture.
- [23] October of 2002: title “Quantization of curvature for surfaces”, in Workshop “PDES and Submanifolds”, TU Berlin, October 25-27, 2002, invited lecture.
- [24] September of 2002: title “ On locally conformally flat Riemannian manifolds with a constant elementary symmetric function”, in Germany-Poland Geometry Conference, September 16-21, 2002, Bedlewo Poland, invited lecture.
- [25] June of 2002: title “Quantization of curvature for compact surfaces in S^n ”, in Second Russian-German Geometry Meeting, June 16-23, 2002, in Saint-Petersburg, Russian, invited lecture.
- [26] May of 2002: title “ Willmore submanifolds and global results”, in Workshop “Contemporary Geometry and Related Topics”, May 16-21, 2002, in Belgrade University, Yugoslavia, invited lecture.
- [27] November of 2001: title “Centroaffine Bernstein problems”, in Workshop “PDES and Submanifolds”, TU Berlin, Nov. 23-25, 2001, invited lecture.
- [28] June of 2000: Temple University, title “the eigenvalues of the Laplacian on Riemannian manifolds”.
- [29] April of 2000: Harvard University, title “ Willmore hypersurfaces in a sphere”.

6. List of Main Publications

- [1] On locally strongly convex affine hypersurfaces with parallel cubic form, Journal of differential geometry, 87 (2011), 239-307 (joint with Zejun Hu and Luc Vrancken)
- [2] Second Eigenvalue of Paneitz Operators and Mean Curvature, Commun. Math. Phys. 305, 555-562 (2011)(joint with D. G. Chen)
- [3] Second eigenvalue of a Jacobi operator of hypersurfaces with constant scalar curvature, Proc. AMS, 140(2012), 291-307 (joint with Xianfeng Wang)
- [4] The second variational formula for the functional $\int_M v^{(6)}(g)dv_g$, Proc. AMS, 139(2011), 2911-2925.(joint with Bin Guo)
- [5] Two Kazdan-Warner type identities for the renormalized volume coefficients and the Gauss-Bonnet curvatures of a Riemannian metric, Pacific J. Math., 251(2011), 257-268. (joint with Bin Guo and Zheng-Chao Han)
- [6] Calabi Product Lagrangian Immersions in Complex Projective Space and Complex Hyperbolic Space, K. Nomizu volume, Results in Math., 59(2011), 453-470. (joint with Xianfeng Wang)
- [7] The classification of 4-dimensional non-degenerate affine hypersurfaces with parallel cubic form, Journal of Geometry and Physics 61 (2011) 2035-2057 (joint with Z. J. Hu, C. C. Li and L. Vrancken)

- [8] Lorentzian Affine Hypersurfaces with Parallel Cubic Form, *Results in Math.*, 59(2011), 577-620. (joint with Z.J. Hu, C. C. Li and L. Vrancken)
- [9] Classification of hypersurfaces with constant Laguerre eigenvalues in R^n , *Science China mathematics*, 54(2011), 1129-1144 (joint with C. P. Wang and T. Z. Li)
- [10] On some rigidity results of hypersurfaces in a sphere, *Proceedings of the Royal Soc. of Edinburgh*, 140A (2010), 477-493 (joint with Qing-ming Cheng and G. Wei)
- [11] Embedded hypersurfaces with constant m -th mean curvature in a unit sphere, *Communications in Contemporary Mathematics*, 12 (2010), 997-1013 (joint with Qing-ming Cheng and G. Wei)
- [12] The Gauss-Bonnet-Grotemeyer theorem in space forms, *Inverse Problems and Imaging*, 4(2010), 655-664. (joint with Eric Grinberg)
- [13] Classification of hypersurfaces with parallel Laguerre second fundamental form in R^n , *Differential Geom. and its Applications*, 28(2010),148-157 (joint with C. P. Wang and T. Z. Li)
- [14] Scalar curvature of hypersurfaces with constant mean curvature in a sphere, *Glasgow Math. J.*, 51(2009), 413-423 (joint with Qing-ming Cheng and Yijun He)
- [15] The Moebius characterizations of Willmore tori and Veronese submanifolds in the unit sphere, *Pacific Journal Math.*, 241(2009), No.2, 227-242. (joint with Zhen Guo and Changping Wang)
- [16] Isotropic Lagrangian submanifolds in complex Euclidean space and complex hyperbolic space, K. Nomizu volume, *Results in Math.*, 56(2009), 387-403 (joint with Xianfeng Wang)
- [17] On locally strongly convex affine hypersurfaces with parallel cubic form, Part I, *Differential Geom. And its Applications*,27(2009),188-205. (joint with Zejun Hu, Udo Simon and Luc Vrancken)
- [18] Anisotropic version of a Theorem of H. Hopf, *Ann. Global Anal. Geom.*,35(2009), 243-247, (joint with Yijun He.)
- [19] Compact embedded hypersurfaces with constant higher order anisotropic mean curvature, *Indiana Univ. Math. J.*, 58(2009), 853-868 (joint with Yijun He. H. Ma, J. Q. Ge)
- [20] Stability of hypersurfaces with constant r -th anisotropic mean curvature, *Illinois Journal of Math.*, 52(2008), Vol. 4, 1301-1314.(joint with Yijun He.)
- [21] Characterizations of the Calabi product of hyperbolic affine spheres, *Results in Math.*, 52(2008), 299-314 (joint with Zejun Hu and Luc Vrancken).
- [22] Some variational problems in geometry of submanifolds, *Diff. Geom. Appl. Proc. Conf. in Honour of L. Euler, Olomouc, August, 2007*, 183-196.
- [23] Lagrangian spheres in the 2-dimensional complex space forms, *Israel Journal of Mathematics*, 166(2008),113-124 (joint with H. Ma and L. Su)
- [24] Schouten curvature functions on locally conformally flat Riemannian manifolds, *J. Geom.* 88(2008),75-100(joint with Z. J. Hu and Udo Simon).

- [25] Integral formula of Minkowski type and new characterization of the Wulff shape, *Acta Math Sinica*, 24(2008), 697-704(joint with Yijun He).
- [26] A new variational characterization of the Wulff shape, *Differential Geom. And its Applications*,26(2008),377-390(joint with Yijun He).
- [27] The Gauss-Bonnet-Grotemeyer Theorem in spaces of constant curvature, arXiv:0707.1860 (joint with Eric L. Grinberg).
- [28] r-minimal subamnfolds in space forms, *Ann. Global Anal. Geom*,32(2007), 311-341, (joint with Linfen Cao).
- [29] A variational problem for submanifolds in a sphere, *Monatsh. Math*, 152(2007), 295-302. (joint with Zhen Guo)
- [30] Compact embedded rotation hypersurfaces of S^{n+1} , *Bull. Braz. Math. Soc*, 38(1)(2007), 81-99. (joint with Guoxin Wei)
- [31] Classification of Moebius isoparametric hypersurfaces in S^5 , *Monatsh. Math*, 151(2007), 201-222. (joint with Zejun Hu and Changping Wang).
- [32] Embedded rotational hypersurfaces with constant scalar curvature in S^n : a correction to a statement in M. L. Leite, *Manuscripta Math.* 67 (1990),285-304. *Manuscripta Math*, 120(2006), 319-323. (joint with Guoxin Wei)
- [33] Hamiltonian-minimal Lagrangian submanifolds in complex space forms, *Pacific Journal of Mathematics*, 227(2006), No.1, 43-63. (joint with I. Castro and F. Urbano)
- [34] Classification of Lagrangian Willmore submanifolds in nearly Kaehler 6-sphere $S^6(1)$ with constant scalar curvature, *Glasgow Math.J.* 48(2006), 53-64. (joint with Guoxin Wei)
- [35] Stable complete minimal hypersurfaces in R^4 , *Matematica Contemporanea*, Sociedade Brasileira de Matematica, 28(2005),183-188. (joint with Guoxin Wei)
- [36] Variational problems and PDES in affine differential geometry,*Banach Center Publications*, Vol. 69, 2005,9-41.
- [37] Classification of Moebius isoparametric hypersurfaces in S^4 , *Nagoya Math. J*, Vol. 179(2005), 147-162 (joint with Zejun Hu)
- [38] A basic inequality and new characterization of Whitney spheres in a complex space form, *Israel Journal of Mathematics*, 146(2005),223-242 (joint with Luc Vrancken)
- [39] A new variational characterization of n-dimensional space form, *Transaction of the American Math. Soc*,356(2004), No.8,3005-3023. (joint with Zejun Hu)
- [40] Centroaffine Bernstein problems, *Differential Geom. And its Applications*,20(2004),331-356. (joint with An-Min Li, Simon Udo)
- [41] Scalar curvature, Killing vector fields and harmonic one-forms on compact Riemannian manifolds, *Bull. London Math Soc*, 36(2004), 587-598. (joint with Zejun Hu)
- [42] Classification of hypersurfaces with parallel Moebius second fundamental form in $(n+1)$ -dimensional sphere, *Science in China Series A-Mathematics*, 47(3) (2004),417-430. (joint with Zejun Hu)

- [43] Willmore Lagrangian spheres in the complex Euclidean space C^n , Ann. Global Anal. Geom, 25(1)(2004), 73-98 (joint with Zejun Hu)
- [44] Sextic holomorphic form of affine surfaces with constant affine mean curvature, Archiv der Mathematik,82(3)(2004),263-272
- [45] Quantization of curvature for compact surfaces in S^n , Mathematische Zeitschrift, 245(2003), No.2, 201-216. (joint with Udo Simon)
- [46] Submanifolds with constant Moebius scalar curvature in S^n , Manuscripts Math, 111(2003), 287-302.(joint with Zejun Hu)
- [47] Moebius geometry of hypersurfaces with constant mean curvature and scalar curvature, Manuscripts Math, 112(2003), 1-13.(joint with Changping Wang)
- [48] New examples of Willmore surfaces in S^n , Ann. Global Anal. Geom., 23(2003), 205-225.(joint with Luc Vrancken)
- [49] Willmore submanifolds in a sphere, Mathematical Research Letters 9(2002), 771-790.
- [50] Willmore surfaces in S^n , Ann. Global Anal. Geom. 21(2002), 203-213.
- [51] The conjugate nets, Cartan submanifolds, and Laplace transformations in space forms, Journal of Math. Analysis and Application, 267(2002), 726-745.(joint with Zhen Guo)
- [52] Moebius isoparametric hypersurfaces in S^{n+1} with two distinct principal curvatures, Acta Math. Sinica, 18(2002), 437-446.(joint with Huli Liu, Changping Wang and Guosong Zhao)
- [53] The second variational formula for Willmore submanifolds, Dedicated to Shiing-Shen Chern on his 90th birthday. Results in Math. 40(2001), 205-225.(joint with Zhen Guo and Changping Wang)
- [54] The classification of homogeneous 2-spheres in CP^n , Asian J. Math. 5(2001),no.1,93-108.(joint with Changping Wang and Faen Wu)
- [55] Willmore hypersurfaces in a sphere, Asian J. Math. 5(2001),no.2, 365-377.
- [56] A Moebius characterization of Veronese surfaces in S^n , Math. Ann. 319(2001),no.4, 707-714.(joint with Changping Wang and Faen Wu)
- [57] L^2 harmonic forms on a complete stable hypersurfaces with constant mean curvature, Kodai Mathematical Journal, 21(1998), 1-9.
- [58] Weingarten surfaces and the sine-Gordon equation. Science in China Ser. A 40 (1997), no.10, 1028-1035.(joint with Weihuan Chen)
- [59] Global rigidity theorems of hypersurfaces. Arkiv for Matematik 35(1997), no.2, 327-351.
- [60] Complete spacelike submanifolds in de Sitter space with parallel mean curvature vector satisfying $H^2 = 4(n-1)/n^2$. Ann. Global Anal. Geom. 15(1997), no.4, 335-345.
- [61] Generalized Cartan identities on isoparametric manifolds. Ann. Global Anal. Geom. 15(1997), no.1, 45-50.

- [62] Bonnet surfaces and isothermic surfaces. *Results in Math.* 31(1997), no.1-2, 40-52.(joint with Weihuan Chen)
- [63] Hypersurfaces with constant scalar curvature in space forms. *Math. Ann.* 305(1996), no.4, 665-672.
- [64] The Ricci curvature of totally real 3-dimensional submanifolds of nearly Kaehler 6-sphere. *Bull. Belg. Math. Soc. Simon Stevin* 3(1996), no.2, 193-199.
- [65] A characterization of Clifford minimal hypersurfaces in S^4 . *Proc. Amer. math. Soc.* 123(1995), no.10, 3183-3187.