

CURRICULUM VITA

Xiaojun Huang

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I. GENERAL INFORMATION

Citizenship: U.S.A.

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Education:

Ph.D. in Mathematics, Washington University, August, 1994.

II. PROFESSIONAL EXPERIENCES:

1. Regular Position:

Graduate Student, Washington University, 1989- 1994.

L. E. Dickson Instructor of Mathematics, The University of Chicago, 1994- 1997.

Postdoctoral Fellow, Mathematical Sciences Research Institute at Berkeley, 1995- 1996.

Tenure-track Assistant Professor, Rutgers University at New Brunswick, 1997- 2000.

Associate Professor, Rutgers University at New Brunswick, 2000-2005.

Professor of Mathematics, Rutgers University at New Brunswick, 2005-present.

2. Visiting Professorship at the Following Institutes:

University of Rouen, France, June-July, 2002.

University of Chicago, October-December, 2002.

University of California at San Diego, March-June, 2002 and February- March, 2006.

Harvard University, March, 2006- June, 2006.

3. National Science Foundation Supports and Teaching Awards

Awardee of the NSF Research Grant DMS-0801056, June, 2008 - July, 2011, \$195,000.

Awardee of the NSF Research Grant DMS-0500626, June, 2005 - July, 2008, \$125,000.

Awardee of the NSF Research Grant DMS-0200689, June, 2002 - June, 2005, \$93,000.

Awardee of the NSF Research Grant DMS-9970439, June, 1999 - June, 2002, \$77,000.

Awardee of the NSF Postdoctoral Fellowship Grant-9627423, September, 1996 -
June, 1999, \$75,000.

Awardee of the NSF Research Grant DMS-9500881, July, 1995- December, 1997, \$37,000.

Rutgers Research Council Grant, September, 1997-2003.

Teaching Award from the Provost of the University of Chicago in 1995.

III. PUBLICATIONS

1. Articles published or accepted for publication in the refereed journals

- [1] Xiaojun Huang and Wanke Yin, A Bishop surface with a vanishing Bishop invariant, *Invent. Math.*, published on-line in December 2008 and will appear in the May or June 2009 issue of *Inventiones*.
- [2] S. Baouendi, P. Ebenfelt and Xiaojun Huang, Super-rigidity for CR embeddings of real hypersurfaces into hyperquadrics, *Advances in Math.* 219, no. 5, 1427–1445, 2008.
- [3] Xiaojun Huang and Wanke Yin, A codimension two CR singular submanifold that is formally equivalent to a symmetric quadric, accepted for publication by *International Mathematical Research Notices*, November, 2008.
- [4] J. Faran, Xiaojun Huang, Shanyu Ji and Y. Zhang, A criterion for a rational map to be equivalent to a polynomial map, accepted for publication in *Quart. Jour. of Math.*, a special issue in honor of J. Kohn's 75th birthday, 2008.
- [5] Xiaojun Huang and Yuan Zhang, Monotonicity for the Chern-Moser-Weyl curvature tensor and CR embeddings, accepted for publication in *Sciences in China*, a special issue in honor of Professor D. Zhong, 2008.
- [6] Xiaojun Huang and Shanyu Ji, On the CR umbilical points on real ellipsoids in complex two-spaces, *Transactions of American Mathematical Society* (359) No.3, 1191-1204, 2007.
- [7] Xiaojun Huang, On the isolated complex singularities and their CR links, *Sciences in China* Vol 49 (11), 1441-1450, 2006.
- [8] Xiaojun Huang, S. Ji and Dekang Xu, A new gap phenomenon for proper holomorphic maps from \mathbf{B}^n into \mathbf{B}^N , *Math. Res. Letts.* Vol 13, 515-529, 2006.
- [9] Xiaojun Huang, S. Luk and S. S. T. Yau, On a CR family of compact strongly pseudoconvex CR manifolds, *Jour. of Diff. Geom.* Vol. 72, 353-379, 2006.
- [10] S. M. Baouendi and Xiaojun Huang, Super-rigidity for holomorphic mappings between hyperquadrics with positive signatures, *Jour. of Diff. Geom.* Vol. 69, 379-398, 2005.

- [11] P. Ebenfelt, Xiaojun Huang and D. Zaitsev, The equivalence problem and rigidity for hypersurfaces embedded into hyperquadrics, *American Jour. of Math.* Vol 127, 129-168, 2005.
- [12] Xiaojun Huang, S. Ji and D. Xu, several results for holomorphic mappings from \mathbf{B}^n into \mathbf{B}^N , *Contemporary Math.*, a special issue in honor of F. Treves, 267-293, 2005.
- [13] P. Ebenfelt, Xiaojun Huang and D. Zaitsev, Rigidity of CR-immersions into spheres, *Comm. in Analysis and Geometry* Vol 12 (No. 3), 629-668, 2004.
- [14] Xiaojun Huang, On a semi-linearity property for holomorphic maps, *Asian Jour. of Math.* Vol 7, No. 4, 463-492, 2003. (A special issue in honor of Professor Y-T Siu's 60th birthday).
- [15] Xiaojun Huang, H. S. Luk and S. S. T. Yau, Punctured local holomorphic De Rham Cohomology, *Jour. of the Japanese Math. Soc.* 55 (2003), 633-640.
- [16] Xiaojun Huang and Shanyu Ji, Cartan-Chern-Moser theory on algebraic hypersurfaces and an application to the study of automorphism groups of algebraic domains, *Annales. de L'Inst. Fourier* 52 (2002), 1793-1831.
- [17] Xiaojun Huang and Shanyu Ji, Mapping \mathbf{B}^n into \mathbf{B}^{2n-1} , *Invent Math.* 145 (2), 219-250, 2001.
- [18] Xiaojun Huang, Shanyu Ji and S. S. T. Yau, An example of a real analytic strongly pseudoconvex hypersurface which is not holomorphically equivalent to any algebraic hypersurfaces, *Arkiv for Math* 39, 2001, 75-93.
- [19] Xiaojun Huang, A removable singularity property for CR mappings between real analytic hypersurfaces, *Comm in Partial Differential Equations* 25, 299-317 (2000).
- [20] Xiaojun Huang, J. Merker and F. Meylan, Mappings between degenerate real analytic hypersurfaces in \mathbf{C}^n , *Contemporary Math.* 251, 321-338 (2000).
- [21] Xiaojun Huang, On a linearity problem of proper holomorphic maps between balls in complex spaces of different dimensions, *Jour. of Diff. Geom.* 51 (No. 1), 13-33 (1999)
- [22] Xiaojun Huang and Shanyu Ji, Global holomorphic extension of a local map and a Riemann mapping theorem for algebraic domains, *Mathematical Research Letters* 5, 247-260 (1998).

- [23] Xiaojun Huang, On an n -manifold in \mathbf{C}^n near an elliptic complex tangent, *Jour. of the Amer. Math. Soc.*, Vol 11 (3), 669-692 (1998).
- [24] Xiaojun Huang, Schwarz reflection principle in complex spaces of dimension two, *Comm. in PDE* (21), 1781-1828 (1996).
- [25] M. S. Baouendi, Xiaojun Huang and L. Rothschild, Regularity of CR mappings between algebraic hypersurfaces, *Invent. Math.* 125 (1996), 13-36.
- [26] Xiaojun Huang and Yifei Pan, A remark on the holomorphic proper self mappings of domains in \mathbf{C}^n , *Complex Variables* 31(1996), 81-85.
- [27] Xiaojun Huang and Yifei Pan, Proper holomorphic mappings between real analytic domains in \mathbf{C}^n , *Duke Math. J.* 82 (1996), 437-446.
- [28] Xiaojun Huang and Steve Krantz, On a problem of Moser, *Duke Math. J.*, Vol 78 (1995), 213-228.
- [29] M. S. Baouendi, Xiaojun Huang and L. Rothschild, Non-vanishing of the differential of holomorphic mappings at boundary points, *Math. Res. Lett.* 2 (1995), 737-751.
- [30] Xiaojun Huang, A rigidity problem for holomorphic mappings on a class of weakly pseudoconvex domains, *Canadian J. of Math.*, Vol 47 (1995), 405-420.
- [31] Xiaojun Huang, S. Krantz, D. Ma and Yifei Pan, A localized Hopf lemma for holomorphic functions, *Complex Variables* 26 (1995), 273-276.
- [32] Xiaojun Huang, On the mapping problem for algebraic real hypersurfaces in complex spaces of different dimensions, *Annales de L'Institut Fourier* 44 (1994), 433-463.
- [33] Xiaojun Huang, A non-degeneracy property of extremal mappings and iterates of holomorphic self-mappings, *Annali Scuola Norm. Sup. Pisa, Serie IV. Vol. XXI* (1994), 399-419.
- [34] Xiaojun Huang, A preservation principle of extremal mappings near a strongly pseudoconvex point and its applications, *Illinois J. of Math.* 38 (1994), 283-303.
- [35] Xiaojun Huang and Steve Krantz, A unique continuation problem for holomorphic mappings, *Comm in Part. Diff. Equ.* 18 (1993), 241-263.
- [36] Xiaojun Huang and Yifei Pan, Proper holomorphic self-mappings of Hartogs domains in \mathbf{C}^2 , *Michigan Math. J.* 40 (1993), 211-217.

- [37] Xiaojun Huang, Some applications of Bell's theorem to weakly pseudoconvex domains, *Pacific J. of Math.* 158 (1993), 305-315.

2. Published conference proceedings, lecture notes and books edited

- [38] Xiaojun Huang, Shanyu Ji and Wanke Yin, Recent Progress on Two Problems in Several Complex Variables, *Proceedings of the 4th International Congress of Chinese Mathematicians* (Vol 1), 563-576, December, 2007.
- [39] Xiaojun Huang and Shanyu Ji, On some rigidity problems in Cauchy-Riemann Geometry, Proceeding on the 10th Anniversary of the Mathematical Institute in the East China Normal University, AMS/IP Studies in Advanced Mathematics, Volume 39, 89-107, 2007.
- [40] Xiaojun Huang, Lectures on the Local Equivalence Problems for Real Submanifolds in Complex Manifolds, *Lecture Notes in Mathematics* 1848 (C.I.M.E. Subseries), Springer-Verlag, 2004, 109-163.
- [41] Xiaojun Huang and P. Ebenfelt, On a generalized reflection principle in 2-spaces, *Complex Analysis and Geometry*, Ohio State Univ. Math. Res. Publ. 9, Walter De Gruyter, 2001, 125-140.
- [42] Xiaojun Huang, On some problems in several complex variables and CR geometry, *Proceedings of the first ICCM* (edited by L. Yang and S. T. Yau), AMS/IP Stud. Adv. Math. 20, 383-396, 2001.

3. Preprints

- [43] S. Baouendi, P. Ebenfelt and Xiaojun Huang, Holomorphic maps between hyperquadrics with small difference in signature, preprint, 2008.
- [44] Xiaojun Huang, Shanyu Ji and Wanke Yin, On the third gap for proper holomorphic maps between balls, preprint, 2008. (65 pages)