

CURRICULUM VITAE

Min Ru

EDUCATION

1990 Ph.D. in Mathematics, University of Notre Dame.

1986 M.S. in Mathematics, East China Normal University, China.

1983 B.S. in Mathematics, East China Normal University, China.

AWARDS AND HONORS

AMS Fellow, 2019.

University of Houston Research and Scholarship Award, 1999.

Epson Award in Value Distribution Theory, Hong Kong, 1996.

ACADEMIC POSITION

2002-present Professor, University of Houston.

1997-2002 Associate Professor, University of Houston.

1995-1997 Assistant Professor, University of Houston.

1992-1995 Benjamin Peirce Assistant Professor, Harvard University.

1990-1992 Assistant Professor, National University of Singapore.

EDITORIAL BOARDS

Houston Journal of Mathematics, 2006-

Electronic Research Archive by the American Institute of
Mathematical Sciences, 2019-

Taiwanese J. Math., 2020-Present.

FIELDS OF INTEREST

Complex Geometry, Diophantine Geometry, Differential Geometry.

GRANT SUPPORT

2017-2022 PI, Simons Foundation Collaboration Grant.

2011-2014 PI, National Security Agency Research Grant.

2009-2011 PI, National Security Agency Research Grant.

Grant from Fields Institute and NSF for special program at Fields, 2008.

2007-2009 PI, National Security Agency Research Grant.

2004-2006 PI, National Security Agency Research Grant.

2002-2004 PI, National Security Agency Research Grant.

2000-2002 PI, National Security Agency Research Grant.

1998-2000 PI, National Security Agency Research Grant.

1998-2002 PI, National Science Foundation Research Grant in Mathematics, DMS-9800361.

1995-1998 PI, National Science Foundation Research Grant in Mathematics, DMS-9506424.

1993-1995 PI, National Science Foundation Research Grant in Mathematics, DMS-9300526.

Co-PI for the NSF grant for Texas Geometry and Topology Conferences, 2006-2009, 2009-2012, 2013-2015, 2015-2017, 2017-2019, 2019-2021.

PUBLICATIONS

1. X. Pang & Min Ru. On the total number of entire deficient functions of entire functions, *Chinese Ann. of Math., Ser. A*, **6**(1985), 411-424.
2. Min Ru. A general theorem on the total number of deficient values

- for a class of meromorphic functions, *Chinese Ann. of Math.*, Ser. A, **9**(1988), 178-187.
3. Min Ru. Some discussion on common Borel directions of meromorphic functions, *J. East China Normal Univ. Sci. Ed.*, **1**(1989), 39-50.
 4. Min Ru & W. Stoll. Courbes holomorphes évitant des hyperplans mobiles, *C. R. Acad. Sci. Paris t310, sere I*, (1990), 45-48.
 5. Min Ru & P.M. Wong. Integral points of $P^n - \{2n + 1 \text{ hyperplanes in general position}\}$, *Inventiones Mathematicae*, **106**(1991), 195-216.
 6. Min Ru. On the Gauss map of minimal surfaces immersed in R^n , *Journal of Differential Geometry*, **34**(1991), 411-423.
 7. Min Ru & W. Stoll. The second main theorem for moving targets, *Journal of Geometric Analysis*, **1**(1991), 99-138.
 8. Min Ru. On the Gauss map of minimal surfaces with finite total curvature, *Bulletin of the Australian Math. Soc.*, **44**(1991), 225-232.
 9. Min Ru & W. Stoll. The Cartan conjecture for moving targets, *Proceeding of Symposia in Pure Mathematics*, AMS, **53**(1991), 477-508.
 10. Min Ru & W. Stoll. The Nevanlinna conjecture for moving targets, *Research and Lecture notes in Mathematics*, Mediterranean Press, (1991), 293-308.
 11. Min Ru. Integral points and the hyperbolicity of the complement of hypersurfaces, *J. Reine Angew. Math.*, **442**(1993), 163-176.
 12. Min Ru. Gauss map of minimal surfaces with ramification, *Trans. Amer. Math. Soc.*, **339**(1993), 751-764.
 13. Shanyu Ji & Min Ru. Global Lojasiewicz inequality, defect relation and applications of holomorphic curve theory, *Contemp. Math.*, AMS, **142**(1993), 49-59.
 14. Min Ru. Geometric and arithmetic aspects of P^n minus hyperplanes, *American Journal of Mathematics*, **117**(1995), 307-321.

15. Min Ru & P. Vojta. Schmidt's subspace theorem with moving targets, *Inventiones Mathematicae*, **127**(1997), 51-65.
16. Min Ru. The second main theorem on parabolic manifolds, *Indiana Univ. Math. Journal.*, **46**(1997), 299-318.
17. R. Osserman & Min Ru. An estimate for the Gauss curvature on minimal surfaces in \mathbf{R}^m whose Gauss map omits a set of hyperplanes, *Journal of Differential Geometry*, **46**(1997), 578-593.
18. Min Ru. On the general form of the second main theorem, *Trans. Amer. Math. Soc.*, **349**(1997), 5093-5105.
19. Min Ru. Nevanlinna theory and its relation with Diophantine approximation, *Bulletin of the Hong Kong Math. Soc.*, **1**(1997), 343-349.
20. K. Györy and Min Ru. Integer solutions of a sequence of a decomposable form inequalities, *Acta Arithmetica*, **86**(1998), 227-237.
21. Min Ru and J. Tzu-Yueh Wang. Diophantine approximation with algebraic points of bounded degree, *Journal of Number Theory*, **81**(2000), 110-119.
22. Min Ru. Algebroid functions, Wirsings theorem and their relations, *Math. Zeit.*, **233**(2000), 137-148.
23. Min Ru. A uniqueness theorem for rational points in projective space, *Journal of Number Theory*, **85**(2000), 85-91.
24. Min Ru. A weak effective Roth's theorem over function fields, *Rocky Mountain Journal of Mathematics*, **30**(2000), 723-734.
25. Min Ru. A note on p-adic Nevanlinna theory, *Proc. Amer. Math. Soc.* **129**(2001), 1263-1269.
26. Min Ru. The moving target problems in Nevanlinna theory, *Complex Variables*, **43**(2001), 417-431.
27. Min Ru. A uniqueness theorem for moving targets without counting multiplicities, *Proc. Amer. Math. Soc.*, **129**(2001), 2701-2707.

28. Min Ru. Uniqueness theorems for p -adic holomorphic curves, *Illinois Journal of Mathematics*, **45**(2002), 487-493.
29. Min Ru. A defect relation for holomorphic curves intersecting hypersurfaces, *American Journal of Mathematics*, **126**(2004), 215-226.
30. W. Cherry and Min Ru. Rigid analytic Picard theorems, *American Journal of Mathematics*, **126**(2004), 873-889.
31. Min Ru and Julie Wang. Truncated second main theorem with moving targets, *Trans. Amer. Math. Soc.*, **356**(2004), 557-571.
32. Min Ru and Eunjeong Yi. Nevanlinna theory and iteration of rational maps, *Mathematische Zeitschrift*, **249**(2005), 125-138.
33. Zhihua Chen and Min Ru. Decomposable form equations without the finiteness property, *Proc. Amer. Math. Soc.*, **133**(2005), 1929-1933.
34. Zhihua Chen and Min Ru. Integer solutions to decomposable form inequalities, *Journal of Number Theory*, 115(2005), 58-70
35. Yuancheng Liu and Min Ru. Degeneracy of holomorphic curves in surfaces, *Science in China, Series A, Mathematics*, 48(2005), 156-167
36. Yuancheng Liu and Min Ru. A defect relation for meromorphic maps on parabolic manifolds intersecting hypersurfaces, *Illinois J. Math.*, 49(2005), 237-257
37. Min Ru and Julie Wang. A second main theorem on parabolic manifolds, *Asian J. Math.*, 9(2005), 349-372
38. Lu Jin and Min Ru. A unicity theorem for moving targets counting multiplicities, *Tohoku Math. Journal*, 57(2005), 589-595
39. Zhihua Chen and Min Ru. A uniqueness theorem for moving targets with truncated multiplicities, *Houston Math. J.*, 32(2006), 589-601
40. Lu Jin and Min Ru. Values of Gauss maps of complete minimal surfaces in \mathbf{R}^m on annular ends, *Trans. Amer. Math. Soc.*, 359(2007), 1527-1546.

41. Lu Jin and Min Ru. Algebraic curves and the Gauss map of algebraic minimal surfaces, *Diff. Geom. & its Applications*, 25(2007), 701-712.
42. Min Ru. The second main theorem with hypersurfaces over function fields, "The Proceedings of the Intern. Conf. on Complex Geometry and Related Fields", AMS/IP Stud. Adv. Math. 39(2007), 251-261.
43. Yan Xu and Min Ru. Uniqueness theorem for algebraic curves on compact Riemann surfaces, *Science in China, Series A*, 50(2007), 683-688.
44. Min Ru. A fundamental inequality for holomorphic curves into projective varieties, *Proceedings ICCM*, Vol II(2007), 534-544, Higher Educational Press (Beijing, China)/International Press (Somerville, MA, USA)
45. Matt Dulock and Min Ru. A uniqueness theorem for holomorphic curve encountering hypersurfaces in projective space, *Complex Variables and Elliptic Equations*, 53(2008), 797-802.
46. Yasheng Ye and Min Ru. A big Picard theorem for holomorphic maps into complex projective space, *Canadian Math. Bulletin*, 52(2009), 154-160.
47. Min Ru Holomorphic curves into algebraic varieties, *Annals of Mathematics*, 169(2009), 255-267.
48. Zihua Chen, Min Ru and Qiming Yan. The Truncated Second Main Theorem and Uniqueness Theorems, *Science in China*, 53(2010), 605-616.
49. Matt Dulock and Min Ru. Uniqueness of holomorphic curves into abelian varieties, *Trans. Amer. Math. Soc.*, 63(2011), 131-142
50. Min Ru. Integer solutions to decomposable and semi-decomposable form inequalities *Publ. Math. Debrecen*, 79(2011), 663-673
51. Min Ru and Julie Wang. An effective Schmidt's subspace theorem for projective varieties over function fields, *International Mathematics Research Notices*, (2012), 651-684

52. Min Ru and Suraizou Sogome. Non-integrated defect relation for meromorphic maps of complete Kähler manifold intersecting hypersurfaces in $\mathbf{P}^n(\mathbf{C})$,
Trans. Amer. Math. Soc. 364(2012), Number 3, 1145-1162
53. Gordon Heier and Min Ru. On essentially large divisors,
Asian Journal of Mathematics, 16(2012), 387-407
54. Zhihua Chen, Min Ru and Qiming Yan. The Degenerated Second Main Theorem and Schmidt's Subspace Theorem,
Science in China, 55(2012), 1367-1380
55. Min Ru and Suraizou Sogome. A uniqueness theorem for meromorphic maps of a complete Kähler manifold into $\mathbf{P}^n(\mathbf{C})$ sharing hypersurfaces, *Proc. Amer. Math. Soc.*, 141(2013), 4229-4239
56. Min Ru. Some Generalizations of the Second Main Theorem Intersecting Hypersurfaces,
Methods and Applications of Analysis, 21(2014), 503-526
57. Hungzen Liao and Min Ru. A note on the Second Main Theorem for holomorphic curves into algebraic varieties,
Bulletin of the Institute of Mathematics, Academia Sinica (New Series), 9(2014), No. 4, 671-684
58. Zhihua Chen, Min Ru and Qiming Yan. Schmidt's Subspace Theorem with Moving Hypersurfaces,
International Mathematics Research Notices, (2015), No. 15, 6305-6329
59. Lei Shi and Min Ru. An improvement of Chen-Ru-Yan's degenerated second main theorem, *Science in China*, 58(2015), No. 12, 2517-2530
60. Min Ru. A defect relation for holomorphic curves intersecting general divisors on projective varieties, *J. of Geom. Analysis*, 26(2016), No. 4, 2751-2776
61. Min Ru. A general diophantine inequality,
Funct. Approx. Comment. Math., 56(2017), No. 2, 143-163
62. Jungim Park and Min Ru. Unicity results of Gauss maps of minimal

- surfaces immersed in \mathbf{R}^m . *J. of Geometry*, **108**(2017), 481-499
63. C. Mills and Min Ru. An improvement defect relations for holomorphic curves in projective varieties, *Complex Analysis and Dynamical Systems VII*, Contemp. Math., **699**, Amer. Math. Soc., Providence, RI, 2017, 263-273
64. Min Ru and G. Ugur. Uniqueness results for algebraic and holomorphic curves into $\mathbf{P}^n(\mathbf{C})$, *International Journal of Mathematics*, **28**(2017), no. 10, 2323-2337.
65. Min Ru and Julie Tzu-Yueh Wang. A subspace theorem for subvarietie, *Algebra and Number Theory*, **11**(2017), no. 10, 2323-2337.
66. S. Hussein and Min Ru. A general defect relation and height inequality for divisors in sub-general position, *Asian Journal of Mathematics*, **22**(2018), 477-492.
67. Min Ru. Some progress in Nevanlinna theory, *J. Jiangxi Normal Univ.*, **1**(2018), 21 pages, ISSN: 1000-5862.
68. Min Ru. A Cartan's Second Main Theorem Approach in Nevanlinna Theory, *Acta Mathematica Sinica, English Series*, In memory of Professor Qikeng Lu, **34**(2018), 1208-1224.
69. Min Ru and Paul Vojta, A birational Nevanlinna constant and its consequences, *Amer. J. Math.*, **142**(2020), No. 3, 957-991.
70. Ru and N. Sibony, The Second Main Theorem in the hyperbolic case, *Math. Ann* **377**(2020), No. 1-2, 759-795.
71. X. Chen, Z. Liu and Min Ru, Value distribution properties for the Gauss maps of the immersed harmonic surfaces, *Pacific Math. J.*, **309**(2020), No. 2, 267-287.
72. Min Ru and R. Walden, Uniqueness results for holomorphic mappings on the disc, *Acta Mathematica Vietnamica*, **45**(2020), 71-81.
73. X. Chen, Y. Li, Z. Liu and Min Ru, Curvature estimate on an open Riemann surface with the induced metric,

Mathematische Zeitschrift, **298**(2021), 451-467.

74. Min Ru and Julie Tzu-Yueh Wang, The Ru-Vojta result for subvarieties, *Intern. J. of Number Theory*, 18(2021), No. 1, 61-74.

75. Y. He and Min Ru, A generalized subspace theorem for closed subschemes in sub-general position, *Journal of Number theory*, 229(2021), 125-141.

76. Y. He and Min Ru, Nevanlinna and algebraic hyperbolicity, *Internat. J. Math.*, 32(2021), No. 12, Paper No. 2140015, 38 pp.

77. M. Ru and P. Vojta, An Evertse-Ferretti Nevanlinna constant and its consequences, *Monatsch Math* 196(2021), No.2, 305-334.

78. Y. He and Min Ru, The stability threshold and Diophantine approximation, *Proc. Amer. Math. Soc.*, Ser. B 9(2022), 241-253.

BOOK

1. Nevanlinna theory and its relation to Diophantine approximation, World Scientific Publishing Co., 2001.

2. Nevanlinna theory and its relation to Diophantine approximation (Second Edition), World Scientific Publishing Co., 2021.

BOOKS EDITED

(co-edited with Bao, Ji, Kaiser) Special issue of the Houston Journal of Mathematics, **28**(2) (2002), in honor of Prof. S.S. Chern.

SELECTED INVITED TALKS

Invited speaker at the “Conference on complex analysis and geometry”, National University of Singapore, 2021 (Virtual).

The result of Thue-Siegel-Roth and beyond, one of the series talks on the 100th anniversary of Xiamen University, China. March 30, 2021.

The beta-constant appeared in algebraic and complex geometry,

Virtual Conference on Several Complex Variables, University of California, San Diego, August 18-21, 2020.

The geometric and arithmetic properties of projective varieties, Analysis Seminar, U.C. Irvine, Feb. 18, 2020.

The beta-constant appeared in algebraic and complex geometry, Virtual Conference on Several Complex Variables, University of California, San Diego, August 18-21, 2020.

Invited speaker on “Analysis and geometry in several complex variables”, the occasion to celebrate the mathematical achievements of Emil J. Straube, Jan. 6-10, 2019, Doha, Qatar.

Invited speaker at “Entire Curves, Rational Curves and Foliation” in the THEMATIC MONTH: Complex Geometry, CIRM, Luminy, France, 2019.

Invited speaker at the special session of “Complex Geometry and Dynamical Systems” at the joint AMS-Vietnam conference, Quy Nhon (Vietnam), June 10-13, 2019.

Five hours mini-course offered at the summer school of “Complex Analysis and PDE”, Hanoi, Vietnam, from June 1-7, 2019.

Invited speaker at the “Tianyuan International conference in SCV”, Changchun, Jilin, China, July 30-August 1, 2019.

Plenary Speaker at “International Conference on Complex Analysis 2019”, Zhejiang University, China, September 18-22, 2019.

Invited talk at the differential geometry seminar, U.C. San Diego, 2019.

Seminar talk at the number theory seminar, University of Colorado, Boulder, Oct. 22, 2019.

Seminar talk at the number theory seminar, University of Copenhagen, Denmark, Nov. 4, 2019.

On the beta-constant which appeared in the Ru-Vojta theorem, Complex analysis and Geometry Seminar, Rutgers University, 2019.

Invited speaker on “complex geometry and several complex variables”, Beijing, July 23-27, 2018.

Invited speaker at the “Conference in Complex Geometry and Several Complex Variables, on occasion of Professor Nancy Stanton’s 70th birthday and retirement, Notre Dame, March 9-11, 2018.

Invited speaker at the “International conference on Nevanlinna theory and Complex Geometry in Honor of Le Van Thiem’s Centenary”, Hanoi, Vietnam, 2/26-3/2, 2018.

Plenary Speaker at “Conference of Complex Analysis in China 2018”, on occasion of Professor Lo Yang’s 80th birthday, Beijing University of Posts and Telecommunication, China, Nov. 11-16, 2018.

Invited Speaker at “The Pacific Rim Conference on Complex and Symplectic Geometry XI”, Hefei, China, 2016.

Speaker at Harvard number theory seminar, 2016.

Invited Speaker, at “Perspectives of Modern Complex Analysis”, In honor of Professor Eremenko’s 60th Birthday, Bedlewo, Poland, 2014.

Invited Speaker at “Conference on Complex Geometry”, In honor of Professor Yum-Tong Siu’s 70th Birthday, the University of Hong Kong, June 25-28, 2013.

Invited Speaker at Hayama Symposium on Complex Analysis in Several Variables XII, in honor of Prof. Junjiro Noguchi’s 60th birthday, July 11-16, 2008, Japan.

Invited 45-minutes talk at “The Fourth International Congresses of Chinese Mathematicians (ICCM)”, Hangzhou, China, Dec., 2007.

Plenary Speaker, The 15th International Conference on Finite or Infinite Dimensional Complex Analysis and Applications, Osaka, Japan, 2007.

PROFESSIONAL ACTIVITIES

Main Organizer (with Qingchun Ji and Xiangyu Zhou), Half month program on “Nevanlinna theory and complex hyperbolicities”, Shanghai

Center of Mathematics, July 14-27, 2019, Shanghai, China.

Co-Organizer (with A. Levin, etc.), The Diophantine Approximation and Value Distribution Theory Workshop & Minicourse at UQAM, Montreal, May 13-17, 2019.

Co-Organizer (with William Cherry, etc.), Special Session on “Value Distribution Theory, Complex Geometry, Diophantine Approximation, and Related Topics”, the joint AMS and VMS(Vietnamese Mathematical Society) meeting, Quy Nhon, June 10-13, 2019, Vietnam.

Main organizer for Texas Geometry and Topology Conference, University of Houston, Spring 2000, 2003, 2006, 2009, 2012, 2015, 2018,

Co-organizer for the special session on complex geometry and several complex variables at AMS-CMS (Chinese Mathematical Society) Shanghai joint meeting, June, 2018.

Co-Organizer (with William Cherry, Mirela Coperiani and Matt Papanikolas), Special Session on “Numbers, Functions, Transcendence, and Geometry”, 2017 Fall Central Sectional AMS Meeting, 2017.

Co-organizer for the workshop on “Distribution of Rational and Holomorphic Curves in Algebraic Varieties” at the Banff International Research Station for Mathematical Innovation and Discovery, 2015.

Main-Organizer for the ”International Conference on Complex Geometry and Several Complex Variables”, East China Normal University, Shanghai, May 11 - 15, 2015.

Co-organizer (Main organizer) for “2012 Conference on Nevanlinna Theory and Related Topics”, University of Notre Dame, March 2012.

Co-organizer for “Conference on Value Distributions and Complex Geometry” at the National Center for Theoretical Sciences(NCTS), Hsinchu, Taiwan, July 27-30, 2009.

Co-Organizer (with John Bland, Paul Vojta, PM Wong, Steve Kudla, Katia Consani), Six-month thematic program on Arithmetic Geometry, Hyperbolic Geometry and Related Topics at Fields Institute from

July 1-December 31, 2008.

Co-organizer for the special session on several complex variables in the AMS-Shanghai joint meeting, Dec., 2008.

Co-Organizer, Special Session in "Interconnections among Diophantine geometry, algebraic geometry, and value distribution theory", American Mathematics Society Meeting, University of Texas, October 8-10, 1999.

PH.D. STUDENTS

Eunjeong Yi (Ph.D. 2003), Yuangchen Liu (Ph.D. 2006), Dekang Xu (Ph.D. 2006, joint with Shanyu Ji), Matt David Dulok (Ph.D. 2008), Suraizou Sogome (Ph.D. 2011), Saud Hussein (Ph.D. 2016), Jungim Park (Ph.D. 2016), Hungzen Liao (Ph.D, 2016), Shi Lei (Ph.D. 2016), Gul Ugur (Ph.D. 2017), Charles Mills (Ph.D. 2017), Richard Walden (Ph.D. 2019), Yan He (Ph.D. 2021).