

CURRICULUM VITA

Wenxiong Chen

Professor

Department of Mathematics

Yeshiva University

Here the citation numbers are from Google-Scholar, and the citation rankings are from Math-SciNet, as of Feb. 2023.

Invited Presentations

Gave over 50 presentations (mostly invited) at national and international meetings including 16 special sessions of AMS meetings (see Appendix C).

Invited to give numerous colloquium and seminar talks at various universities including Princeton University, Columbia University, and UCLA (see Appendix C).

Journal Editors

Serving as editors for
Communications on Pure and Applied Analysis, and for
Advanced Nonlinear Studies.

Served as an editor for
Nonlinear Analysis A from 2012 to 2020.

Teaching

Dedicate to high quality teaching. Have taught a wide range of undergraduate and graduate courses and directed many Ph.D. students and visiting Postdoc fellows in their research (see Appendix D).

Who's Who listing

Biography has been listed in many Who's Who (see Appendix E).

Academic Experience

Area of Research

Nonlinear Partial Differential Equations, Geometric Analysis, and Functional Analysis.

Positions Held

Chair Dept of Math, Yeshiva University 2016-2020

Professor Dept of Math, Yeshiva University 2002-present and
Dept of Math, Missouri State U, 2002-04

Associate Prof. Dept of Math, Missouri State U, 96-02

Assistant Prof. Same as above, 1991-96

Visiting Assoc. Prof. Dept of Math, UCLA, 1998

Visiting Assist. Prof. Dept of Math, Univ. of Arizona, 1990-91

Visiting Assist. Prof. Dept of Math, Univ. of Pennsylvania, 1987-90

Services

Panelist for NSF and reviewed proposals for NSF.

1. Radial Symmetry of Ancient solutions to nonlocal parabolic equations, *Adv. Math*, in press, 2022, with Leyun Wu.
2. Hopf's lemmas for parabolic fractional p -Laplacians, *CPAA*, 21 (2022),

14. Fractional equations with indefinite nonlinearities, *Disc. Cont. Dyna. Sys.*, 39(2019) 1257-1268, with Congming Li and Jiuyi Zhu.
15. Direct methods on fractional equations, *Disc. Cont. Dyna. Sys.*, 39(2019) 1269-1310, with Shijie Qi.
16. Maximum principle for the fractional p-Laplacian and symmetry of solutions, *Adv. Math.* 335(2018) 735-758, with Congming Li.
17. A direct method of moving planes for the fractional Laplacian, *Adv. Math.* 308 (2017), 404-437, with Congming Li and Yan Li.
18. Maximum principles for a fully nonlinear fractional order equation and symmetry of solutions, *Cal. Var. & PDEs*, (2017) 56: 29. doi:10.1007/s00526-017-1110-3, with Congming Li and Guanfeng Li.
19. A direct method of moving spheres on fractional order equations, *J. Funct. Anal.*, 272(2017) 4133-4157, with Yan Li and Ruobing Zhang.
20. Indefinite fractional elliptic problem and Liouville theorems, *J. Differential Equations*, 260(2016) 4758-4785, with Jiuyi Zhu.
21. A direct blow-up and rescaling argument on nonlocal elliptic equations, *International J. Math.* 27(2016) 1-20, with Congming Li and Yan Li.
22. A Liouville theorem for p -harmonic functions in R_+^n , *Disc. Cont. Dyn. Sys.* 36(2016) 1721-1736, with Congming Li, Lizhi Zhang, and Tingzhi Cheng.
23. Symmetry and non-existence of solutions for a nonlinear system involving the fractional Laplacian, *Disc. Cont. Dyn. Sys.* 36(2016) 1125-1141. with Ran Zhuo, Xuwei Cui, and Zixia Yuan.
24. Liouville theorems involving the fractional Laplacian on a half space, *Advances in Math.* 274(2015) 167-198, with Yanqin Fang and Rui Yang.
25. Some Liouville theorems for the fractional Laplacian, *Nonlinear Analysis, Theory, Methods & Appl*, 121(2015) 370-381, with L. D'Ambrosio, and Yan Li.
26. Higher order or fractional order Hardy-Sobolev type equations, *Bulletin Inst. Math. Acad. Sinica*, 9(2014) 317-349, with Yanqin Fang.

27. Super poly-harmonic property of solutions for Navier boundary value problems on a half space, *J. Funct. Anal.* 265(2013) 1522-1555, with Yanqin Fang and Congming Li.
28. Liouville type theorems for poly-harmonic Navier problems, *Disc. Cont. Dyna. Sys*, 33(2013) 3937-3955, with Linfen Cao.
29. Super poly-harmonic property of solutions for PDE systems and its applications, *Comm. Pure Appl. Anal*, 12(2013) 2497-2514, with Congming Li.
30. A Liouville type theorem for poly-harmonic Dirichlet problem in a half space, *Advances in Math.* 229(2012) 2835-2867, with Yanqin Fang.
31. Method of moving planes in integral forms and regularity lifting, *Recent Development in Geometry and Analysis*, Higher Education Press and International Press, 2012 with Congming Li.
32. Radial symmetry and regularity of solutions for poly-harmonic Dirichlet problems, *J. Math. Anal. Appl.* 2(2011), 744-753, with Jiuyi Zhu.
33. Regularity of solutions for an integral system of Wolff type, *Advances in Math.* 3(2011), 2676-2699, with Congming Li and Chao Ma.
34. *Methods on Nonlinear Elliptic Equations*, AIMS book series, vol. 4, 2010, with Congming Li.
35. Radial symmetry of solutions for some integral systems of Wolff type, *Disc. Cont. Dyn. Sys.* 30(2011) 1083-1093, with Congming Li.
36. On the stationary solutions of the 2D Doi-Onsager model, *Nonl. Anal: Theory, Methods & Appl.* 8(2010) 2410-2425, with Congming Li and Guofang Wang.
37. Positive regular solutions to a singular integral equation, *Int. J. Pure Appl. Math* 52(2009) 583-602, with Congming Li and Biao Ou.
38. A sup + inf inequality near $R = 0$, *Advances in Math.*, 220(2009) 219-245, with Congming Li.
39. An integral system and the Lane-Emdem conjecture, *Disc. Cont. Dyn. Sys.*, 24(2009) 1167-1184, with Congming Li.
40. Classification of positive solutions for nonlinear differential and integral systems with critical exponents, *Acta Mathematica Scientia*, 4(2009) 949-960, with Congming Li.

41. The best constant in some weighted Hardy-Littlewood-Sobolev inequality, *Proc. AMS*, 136(2008) 955-962, with Congming Li.
42. A priori estimate for the Nirenberg problem, *Disc. Cont. Dyn. Sys. S*, 1(2008) 225-233, with Congming Li.
43. L_p Minkowski problem with not necessarily positive data, *Advances in Math*, 201(2006) 77-89.
44. Classification of solutions for an integral equation, *CPAM*, 59(2006) 330-343, with Congming Li and Biao Ou.
45. Qualitative properties of solutions for an integral equation, *Disc. Cont. Dyn. Sys.* 12(2005) 347-354, with Congming Li and Biao Ou.
46. Classification of solutions for a system of integral equations, *Comm. in PDE*, 30(2005), 59-65, with Congming Li and Biao Ou.
47. Regularity of solutions for a system of integral equations, *CPAA*, 4(2005), 1-8, with Congming Li.
48. Weighted system of integral equations, *Disc. Cont. Dyn. Sys. S*(2005) 164-172, with Chao Jin, Congming Li, and Jisun Lim.
49. On a nonlinear parabolic system-modelling chemical reaction in rivers, *CPAA*, 4(2005) 889-899, with Congming Li and Eric Wright.
50. A generalized affine isoperimetric inequality, *J. Geom. Anal.* 14(2004) 597-612, with Ralph Howard, Erwin Lutwak, Deane Yang, and Gaoyong Zhang.
51. Moving planes, moving spheres, and a priori estimates, *J. Diff. Equa.* 195(2003) 1-13, with Congming Li.

56. Some new approaches in prescribing Gaussian and scalar curvature, Proc. of International Confer. on D.S. and D.E. 1998, 148-159, with Congming Li.
57. Indefinite elliptic problems with critical exponent, Advances in Non-linear PDE and Related Areas, World Scientific, 1998, 67-79, with Congming Li.
58. A priori estimates for prescribing scalar curvature equations, Annals

70. A Trudinger inequality on surfaces with conical singularities, Proc. AMS, 108(1990) 821-832.
71. Scalar curvature on S^n , Math. Ann. 283(1989) 353-365.

Note: The following AMS is the abbreviation of the American Mathematical Society.

1. Invited to give a one-hour talk at International Conference on Nonlinear Analysis and Nonlinear Partial Differential Equations, Aug. 2-5,

13. Invited to give a one hour presentation at International Workshop on Geometric Analysis, Xinxiang, China, June, 2015.
14. Invited to give a 30 minutes presentation at Special Session on Qualitative Behavior of Solutions of Partial Differential Equations of AMS 1107 Meeting, Washington D.C. USA, March, 2015.
15. Invited to give a 30 minutes presentation at International Workshop on Recent Advances in Analysis and Geometry, Sanya, China, Dec. 2014.
16. Gave a 30 minutes presentation at The Special Session on Nonlinear Elliptic Partial Differential Equations and System of the 10th AIMS Conference on Dynamical System, Differential Equations and Applications, Madrid, Spain, July, 2014.
17. Invited to give a one hour presentation at the International Conference on Geometric Analysis, Kunming, China, April 2014.
18. Invited to give a one hour presentation at the International Conference on Nonlinear Elliptic Equations, Xiamen, China, July, 2013.
 item Gave a 30 minutes presentation at Special Session on Elliptic System and Their Applications of AMS 1089 Meeting, Boulder, April, 2013.
19. Invited to give a one hour presentation at Taiwan National Geometric Analysis Conference, Taiwan National University, June 2012.
20. Invited to give a one hour presentation at the International Conference on Elliptic PDEs, Shanghai JiaoTong University, June 2012.
21. Invited to give a 30-minutes presentation at a special session of the AMS Annual Meeting, New Orlean, January, 2011.
22. Invited to give a 45-minutes presentation at Banff Workshop on PDE and Geometric Analysis, Banff, Canada, August 2010.
23. Invited to give a series of lectures at the Nation-Wide PDE Summer School in Xian, China, July, 2010.
24. Invited to give a one-hour presentation at Huadong International Conference on Partial Differential Equations in Wuhan, China, July 2010.
25. Invited to give a 30-minutes presentation at a special session of AIMS International Conference in Dresden, Germany, May, 2010.

26. Invited to give a one-hour presentation at the Huadong International Conference on Partial Differential Equations in Shandong, China, July 07.
27. Invited to give a one-hour presentation at Zhongyuan International Conference on Partial Differential Equations in Henan, China, May 07.
28. A 30-minutes-presentation at a special session of AMS Eastern meeting, Storrs, Oct. 2006.
29. A 30-minutes-presentation at a special session of the 6th International Conference on Dynamical System and Differential Equations, France, June, 2006.
30. A 20-minute-presentation at a special session of 1015th AMS meeting, Miami, April 2006.
31. A one-hour-invited-presentation at International Workshop on Geometric Analysis, Hunan Univ. Changsha, June 2005.
32. Two one-hour-invited-presentation at International Summer School on Analysis, Zhejiang Univ., Hangzhou, July, 2004.
33. A 15-minute-presentation at PDE session of the International Congress of Mathematicians Beijing, Aug. 2002.
34. A 20-minute-invited-presentation at a special session of 971st AMS Meeting, Williamstown, Oct, 2001.
35. A 20-minute-invited-presentation at a special session of 966th AMS Meeting, Hoboken, April, 2001.
36. A 20-minute-invited-presentation at a special session of 959th AMS Meeting, New York, November, 2000.
37. A 30-minute-invited-presentation at a special session of the AMS and Scandinavian Joint International Conference, Odense, Denmark, June, 2000.
38. A 30-minute-invited-presentation at a special session of the International Conference on Dynamical Systems and Differential Equations, Atlanta, May, 2000.
39. A 20-minute-invited-presentation at a special session of 940th AMS meeting, Gainesville, March, 1999.

40. A one-hour-invited lecture at the 9th International Colloquium on Differential Equations, Plovdiv, Bulgaria, August 1998.
41. A 15-minute-presentation at the International Congress of Mathematicians, Berlin, Germany, August, 1998.
42. A 20-minute-invited presentation at a special session of 933rd AMS Meeting, Philadelphia, April, 1998.
43. A 20-minute-invited-presentation at a special session of 914th AMS Meeting, Lawrenceville, October, 1996.
44. A 45-minute-presentation at a special session of the International Conference on Dynamical Systems and differential Equations, Springfield, May, 1996.
45. A 20-minute-invited-presentation at a special session of 909th AMS Meeting, Iowa City, March, 1996.
46. A 20-minute-invited-presentation at the Conference of Mathematical Approach to Nonlinear Problems, Fayetteville, March, 1994.
47. A 45-minute-invited-presentation at Curvature Equations session of AMS-IMS-SIAM Summer Research Conferences sponsored by the National Science Foundation, Seattle, July, 1993.
48. A 20-minute-invited-presentation at a special session of the 880th AMS Meeting, Salt Lake City, April, 1993.
49. A 45-minute-presentation at an organized session of the First World Congress of Nonlinear Analysis, Tampa, Aug. 1992.
50. A one-hour-invited-presentation at a seminar in the Summer Geometry Institute sponsored by the National Science Foundation, Park City, June, 1992.
51. A 20-minute-presentation at PDE special session of the 873rd AMS Meeting, Springfield, March, 1992
52. A 20-minute-invited-presentation at a special session of the 842nd AMS Meeting, Maryland, April, 1988.
53. A 20-minute-invited-presentation at a special session of the 93rd AMS Annual Meeting, San Antonio, Jan., 1987.

Invited to give numerous colloquium or seminar presentations at various universities such as

University of California at LA,
University of Pennsylvania,
University of California at San Diego,
Rutgers University,
University of Connecticut,
University of Colorado,
University of Arizona,
Temple University,
Polytechnic University,
University of Memphis,
Missouri State University,
Yeshiva University,
Qinghua University,
University of Science and Technology of China,
Hunan University,
Xian Jiaotong University,
Institute of Mathematics, Academia Sinica,
University of California at Riverside,
Ohio State University,
Wayne State University,
Columbia University,
University of Oklahoma,
Princeton University.

APPENDIX D. TEACHING

Courses Taught

(i) Undergraduate Courses

Trigonometry
Pre-calculus
Contemporary Mathematics
Mathematical Modelling
Calculus I, II
Multi-variable Calculus
Advance Calculus
Real Analysis
Complex Analysis
Ordinary Differential Equations
Partial Differential Equations

Modern Algebra

(ii) Graduate Courses

Theories on Ordinary Differential Equations

Theories on Partial Differential Equations

Nonlinear Functional Analysis and Its Applications to PDE

Elliptic Partial Differential Equations

Directing Study and Research

Directed several graduate students in their master thesis at Missouri State U

Directed many undergraduate students in their study of Partial Differential Equations at Yeshiva University

Directed one undergraduate student in his research on Partial Differential Equations at Yeshiva University

Directed one undergraduate student in his honors thesis at Yeshiva University

Directed three Ph.D. students: Ran Zhuo, Yan Li, and Yunyun Hu.

Directed visiting Ph.D. students in their research:

Yanqin Fang, Dongyan Li, Pei Ma, Shijie Qi, Leyun Wu, Zaizheng Li, Pengyan Wang, and Yahui Niu.

Directed visiting postdoctoral fellow in their research:

Linfen Cao, Xuewei Cui, Zixia Yuan, Yongzhong Wang, Lingyu Jin, Mei Yu, and Zhao Liu

APPENDIX E. Who's Who Listing

My biography has been cited in the following

1. Who's Who of the World
2. Who's Who of Emerging Leaders in America
3. Who's Who in the East
4. Who's Who in the West
5. Who's Who in Science and Engineering
6. Who's Who in American Education
7. Who's Who among Young American Professionals

10. The Nonlinear Partial Differential Equations special session at 6th International Conference on Dynamical System and Differential Equations; France, June 2006.
11. The Qualitative Properties of Nonlinear PDE special session at the 1015th AMS meeting; Miami, April 2006.
12. The Nonlinear Elliptic and Parabolic Equations special session at the International Conference on Dynamical System and Differential Equations; Atlanta, June 2000.
13. The Nonlinear Elliptic Equation special session at the 1st International Conference on Dynamical System and Differential Equations; Springfield, June 1996.
14. The Partial Differential Equation special session at 873rd AMS Meeting; Springfield, March, 1992.