Xuwen Chen

Department of Mathematics, University of Rochester
(585) 276-7857 xuwenchen@rochester.edu

Employment

Professor, University of Rochester, July 2022 to present.

Associate Professor, University of Rochester, July 2018 to June 2022.

Assistant Professor, University of Rochester, July 2015 to June 2018.

J.D. Tamarkin Assistant Professor, Brown University, July 2012 to June 2015.

Education

Ph.D. in Mathematics, University of Maryland, May 2012.

Advisors: Manoussos Grillakis and Matei Machedon.

B.A in Pure and Applied Mathematics, Hunan University, July 2007.

Advisors: Quanhui Liu and Bolin Ma.

Grants

NSF DMS-2406620, 2024 - 2027

Schwartz Discover Grant for Undergraduate Summer Research, 2025 (Mentor)

Simons Fellowship, 2022 - 2023

NSF DMS-2005469, 2020 - 2024

Dean's Office Research Fund, 2019 - present

NSF DMS-1464869, 2015 - 2019.

AMS-Simons Travel Grant, 2013 - 2015.

Publications

33. (with J. Wu and Z. Zhang) *The second order Huang-Yang approximation to the Fermi thermodynamic pressure*, arXiv:2505.23136, 89pp.

32. (with S. Shen and Z. Zhang) *l^2-decoupling and the unconditional uniqueness for the Boltzmann equation*, arXiv:2501.14697, 31pp.

31. (with J. Wu and Z. Zhang) *The second order Huang-Yang formula to the 3D Fermi gas: the Gross-Pitaevskii regime*, arXiv:2410.16620, 122pp.

30. (with S. Shen, P. Zhang, and Z. Zhang) *Global Derivation of the 1D Vlasov-Poisson Equation from Quantum Many-body Dynamics with Screened Coulomb Potential*, arXiv:2408.14767, 46pp.

29. (with J. Wu and Z. Zhang) *The Second Order 2D Behaviors of a 3D Bose Gases in the Gross-Pitaevskii Regime*, arXiv:2401.15540, 142pp.

28. (with J. Holmer) *The Derivation of the Boltzmann Equation from Quantum Many-body Dynamics*, arXiv:2312.08239, 106pp.

27. (with S. Shen and Z. Zhang) *Sharp Global Well-posedness and Scattering of the Boltzmann Equation*, arXiv:2311.02008, 42pp.

26. (with S. Shen and Z. Zhang) *Well/Ill-posedness of the Boltzmann Equation with Soft Potential***,** Communications in Mathematical Physics **405** (2024), Article 283, 1-51. DOI : 10.1007/s00220-024-05157-6.

25. (with S. Shen and Z. Zhang) *On the mean-field and semiclassical limit from quantum N-body dynamics*, Journal of Functional Analysis **289** (2025), Article 111100, 1-54. DOI: 10.1016/j.jfa.2025.111100.

24. (with S. Shen and Z. Zhang) *Quantitative derivation of the Euler-Poisson equation from quantum many-body dynamics*, Peking Mathematical Journal **7** (2024) 643-711. DOI: 10.1007/s42543-023-00065-5.

23. (with J. Holmer) *Well/ill-posedness bifurcation for the Boltzmann equation with constant collision kernel*, Annals of PDE **10** (2024), Article 14, 1-44. DOI: 10.1007/s40818-024-00177-w.

22. (with S. Shen, J. Wu, and Z. Zhang) *The derivation of the compressible Euler equation from quantum many-body dynamics*, Peking Mathematical Journal, **7** (2024), 35–90. DOI: 10.1007/s42543-023-00066-4.

21. (with S. Shen and Z. Zhang) *The unconditional uniqueness for the energy-supercritical NLS*, Annals of PDE **8** (2022), Article 14, 1-82. DOI: 10.1007/s40818-022-00130-9.

20. (with J. Holmer) *Quantitative Derivation and Scattering of the 3D Cubic NLS in the Energy Space*, Annals of PDE **8** (2022), Article 11, 1-39. DOI: 10.1007/s40818-022-00126-5.

19. (with J. Holmer) *The Unconditional Uniqueness for the Energy-critical Nonlinear Schrödinger Equation on* $\mathbb{T}^4$, Forum of Mathematics, Pi **10** (2022), Article e3 1–49. DOI: 10.1017/fmp.2021.16.

18. (with J. Holmer) *The Derivation of the Energy-critical NLS from Quantum Many-body Dynamics*, Inventiones Mathematicae **217** (2019), 433-547. DOI: 10.1007/s00222-019-00868-3.

17. (with J. Holmer) *The Rigorous Derivation of the 2D Cubic Focusing NLS from Quantum Many-body Evolution*, International Mathematics Research Notices **2017,** 4173–4216. DOI: 10.1093/imrn/rnw113.

16. (with J. Holmer) *Focusing Quantum Many-body Dynamics II: The Rigorous Derivation of the 1D Focusing Cubic Nonlinear Schrödinger Equation from 3D*, Analysis & PDE **10** (2017), 589-633. DOI: 10.2140/apde.2017.10.589.

15. (with J. Holmer) *On the Klainerman-Machedon Conjecture of the Quantum BBGKY Hierarchy with Self-interaction*, Journal of the European Mathematical Society **18** (2016), 1161-1200. DOI: 10.4171/JEMS/610.

14. (with J. Holmer) *Correlation structures, Many-body Scattering Processes and the Derivation of the Gross-Pitaevskii Hierarchy*, International Mathematics Research Notices **2016**, 3051-3110. DOI: 10.1093/imrn/rnv228.

13. (with J. Holmer) *Focusing Quantum Many-body Dynamics: The Rigorous Derivation of the 1D Focusing Cubic Nonlinear Schrödinger Equation*, Archive for Rational Mechanics and Analysis **221** (2016), 631-676. DOI: 10.1007/s00205-016-0970-6.

12. (with W. Strauss) *Convergence to Equilibrium of a Body Moving in a Kinetic Sea*, SIAM Journal on Mathematical Analysis **47** (2015), 4630–4651. DOI: 10.1137/15M1035549.

11. (with Y. Guo) *On the Weak Coupling Limit of Quantum Many-body Dynamics and the Quantum Boltzmann Equation*, Kinetic and Related Models **8** (2015), 443-465. DOI: 10.3934/krm.2015.8.443.

10. (with W. Strauss) *Velocity Reversal Criterion of a Body Immersed in a Sea of Particles*, Communications in Mathematical Physics **338** (2015), 139-168. DOI: 10.1007/s00220-015-2368-y.

9. (with P. Smith) *On the Unconditional Uniqueness of Solutions to the Infinite Radial Chern-Simons-Schrödinger Hierarchy*, Analysis & PDE **7** (2014), 1683-1712. DOI: 10.2140/apde.2014.7.1683.

8. (with W. Strauss) *Approach to Equilibrium of a Body Colliding Specularly and Diffusely with a Sea of Particles*, Archive for Rational Mechanics and Analysis **211** (2014), 879-910. DOI: 10.1007/s00205-013-0675-z.

7. (with J. Holmer) *On the Rigorous Derivation of the 2D Cubic Nonlinear Schrödinger Equation from 3D Quantum Many-Body Dynamics*, Archive for Rational Mechanics and Analysis **210** (2013), 909-954. DOI: 10.1007/s00205-013-0667-z.

6. *On the Rigorous Derivation of the 3D Cubic Nonlinear Schrödinger Equation with a Quadratic Trap,* Archive for Rational Mechanics and Analysis **210** (2013), 365-408. DOI: 10.1007/s00205-013-0645-5.

5. *Collapsing Estimates and the Rigorous Derivation of the 2d Cubic Nonlinear Schrödinger Equation with Anisotropic Switchable Quadratic Traps*, Journal de Mathématiques Pures et Appliquées **98** (2012), 450-478. DOI: 10.1016/j.matpur.2012.02.003.

4. *Second Order Corrections to Mean Field Evolution for Weakly Interacting Bosons in the Case of Three-body Interactions*, Archive for Rational Mechanics and Analysis **203** (2012), 455-497. DOI: 10.1007/s00205-011-0453-8.

3. *Elementary Proofs for Kato Smoothing Estimates of Schrödinger-Like Dispersive Equations*, Contemporary Mathematics **581** (2012), 63-68. DOI: 10.1090/conm/581/11487.

2. *Classical Proofs of Kato Type Smoothing Estimates for the Schrödinger Equation with Quadratic Potential in* $\mathbb{R}^{n+1}$ *with Application*, Differential and Integral Equations **24** (2011), 209-230.

1. (with Y. P. Xiao, M. M. Lai, J. X. Hou, and Q. H. Liu), *A Secondary Operator Ordering Problem for a Charged Rigid Planar Rotator in Uniform Magnetic Field*, Communication of Theoretical Physics, **44** (2005), 49-50. DOI: 10.1088/6102/44/1/49.

Undergraduate Research Advised

1. A. Rohrbach, *Bernstein polynomials: a bridge between the Weierstrass Theorem and a Landau temperature fluctuation problem*, SIAM Journal of Undergraduate Research, 18 (2025) 205-212. DOI: 10.1137/25S172954X.

Professional Services

Conference Organized

Workshop: The nonlinear Schroedinger equation, its derivation and wellposedness, Beijing, China, Jul. 20-31, 2020. Joint organization with Justin Holmer and Zhifei Zhang. (Postponed due to COVID-19)

Minisymposium for the SIAM Conference on Nonlinear Waves and Coherent Structures, Philadelphia, Aug. 8-11, 2016. Joint organization with Dionisios Margetis.

Referee for Journals

Advances in Mathematics, Annales Henri Poincaré, Cambridge Journal of Mathematics, Communications in Mathematical Physics, Communications in Partial Differential Equations, Communications on Pure and Applied Analysis, Communications on Pure and Applied Mathematics, Contemporary Mathematics, Differential and Integral Equations, Discrete and Continuous Dynamical Systems - Series A, Kinetic and Related Models, Journal of Fixed Point Theory and Applications, Journal of Functional Analysis, Journal of Physics A, Macroscopic Limits of Quantum Systems, Michigan Mathematical Journal, Nonlinearity, Peking Mathematical Journal, Pure and Applied Analysis, SIAM Journal on Mathematical Analysis, University of Rochester's Journal of Undergraduate Research (JUR).

University Services

Ad Hoc Committee, University of Rochester, Spring 2024.

Departmental Services

Postdoc Committee, University of Rochester, Fall 2023 - Present.

Hiring Committee, University of Rochester, Fall 2020 - Spring 2022.

Graduate Committee, University of Rochester, Fall 2020 - Spring 2022.

Organizer of the Analysis Seminar, University of Rochester, Fall 2016 - Spring 2020.

Colloquia and Wing Lecture Committee, University of Rochester, 2015 - Present.

Publicity Committee, University of Rochester, Fall 2017 - Spring 2019.

Organizer of the Brown PDE Seminar, Brown University, Fall 2013 - Spring 2015.

Graduate Admission Committee, Brown University, 2014 and 2015.

Organizer of the Student Analysis / PDE Seminar, University of Maryland, Fall 2008 - Fall 2010.

PhD Students Advised

Shunlin Shen (Coadvise with Zhifei Zhang), PhD 2022. Now Full Professor at University of Science and Technology of China, recipient of the the 5th National Excellent Paper Award for Young PDE Scholars of China (at most 1 annually)

Jiahao Wu (Coadvise with Zhifei Zhang), July 2021 -

Doctoral Thesis Commitee

Younghun Hong (Advisor: Justin Holmer), Brown University, April 2013.

Preliminary Ph.D. Oral Exam Committee

Bai Lin (Advisor: Dan Geba), University of Rochester, May 2017.

Evan Witz (Advisor: Dan Geba), University of Rochester, Dec 2017.

Numann Malik (Advisor: Justin Holmer), Brown University, July 2014.

Undergraduate Project Advised

Cole Miller, University of Rochester, Spring 2019.

Invited Talks and other Academic Presentations

Invited Addresses

79. Jul. 22nd, 2025, PDE mini-workshop, Tsuda University, Kodaira, Japan

78. Jul. 14th, 2025, Recent Advances in Potential Theory and Partial Differential Equations 2025, Okinawa Institute of Science and Technology, Okinawa, Japan

77. Jul. 7th, 2025, Oberseminar Mathematische Physik, Institute for Applied Mathematics, Universität Bonn, Bonn, Germany.

76. Dec. 18th, 2024, 14th AIMS conference, NYU Abu Dhabi, UAE.

75. Nov. 28th, 2024, PDE and Mathematical Physics Seminar, ETH, Zürich, Switzerland.

74. Oct. 10th, 2024, Rutgers Hyperbolic and Dispersive PDE seminar, Rutgers University, New Brunswick, NJ.

73. Jul. 12th, 2024, Colloquium, Institute of Theoretical Physics, Chinese Academy of Sciences, Beijing, China.

72. June. 12th, 2024, PDE Seminar, Shanghai Jiao Tong University, Shanghai, China.

71. June. 11th, 2024, PDE Seminar, ShanghaiTech University, Shanghai, China.

70. May. 17th, 2024, PMJ Meeting, Peking University, Beijing, China.

69. Aug. 30th, 2023, Special Lectures for Top Global University Project, Waseda University, Tokyo, Japan.

68. Jul. 10th, 2023, Colloquium, Fudan University, Shanghai, China.

67. Jun. 9th, 2023, IMS PDE Seminar, the Institute of Mathematical Sciences, Chinese University of Hongkong.

66. Jun. 2th, 2023, Colloquium on Modern Mathematics, Shantou University, Shantou, China.

65. Apr. 25th, 2023, Mini-Workishop on Nonlinear Analysis, Tohoku University, Sendai, Japan.

64. Apr. 21st, 2023, NLPDE seminar, Kyoto University, Kyoto, Japan.

63. Apr. 16th, 2023, AMS Sectional Meeting at University of Cincinnati, Cincinnati, OH.

62. Mar. 22nd, 2023, Colloquia, Morningside Center of Mathematics, Chinese Academy of Sciences, Beijing, China.

61. Mar. 20th, 2023, Analysis & PDE Seminar, Peking University, Beijing, China.

60. Mar. 7th, 2023, Colloquia, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China.

59. Dec. 14th, 2022, Colloquium, Peking University, Beijing, China.

58. Nov. 14th, 2022, Analysis Seminar, University of Texas, Austin, TX.

57. Apr. 11th, 2022, Analysis and Geometric Analysis Seminar, Cornell University, Ithaca, NY.

56. Sep. 24th, 2020, PDE seminar, University of Maryland, College Park, MD. (Zoom Seminar)

55. Dec. 12th, 2019, Colloquium, University of Melbourne, Melbourne, Australia.

54. Mar. 28th, 2019, Random Matrices and Probability Seminar, Harvard University, Cambridge, MA.

53. Mar. 4th, 2019, Colloquium, George Mason University, Fairfax, VA.

52. Feb. 1st, 2019, Colloquium, Nagoya University, Nagoya, Japan.

51. Jan. 4th, 2019, Colloquium on Modern Mathematics, Shantou University, Shantou, China.

50. Dec. 28th, 2018, Colloquium, Hunan University, Changsha, China.

49. Dec. 24th, 2018, Colloquium, Fudan University, Shanghai, China.

48. Dec. 20th, 2018, Colloquium, Jiaxing College, Jiaxing, China.

47. Dec. 17th, 2018, Colloquium, Zhejiang University, Hangzhou, China.

46. Dec. 10th, 2018, Colloquium, South China University of Technology, Guangzhou, China.

45. Sep. 28th, 2018, Analysis Seminar, University of Texas, Austin, TX.

44. Sep. 17th, 2017, AMS Sectional Meeting at SUNY Buffalo, Buffalo, NY.

43. May. 7th, 2017, AMS Sectional Meeting at Hunter College, New York, NY.

42. Oct. 28th, 2016, Colloquium, Georgetown University, Washington, DC.

41. Aug. 8th, 2016, SIAM Conference on Nonlinear Waves and Coherent Structures, Philadelphia, PA

40. Jul. 23rd, 2016, PDE Seminar, Peking University, Beijing, China.

39. Jul. 11th to 22nd, 2016, Applied Math Summer School of Peking University, Beijing, China.

38. Jul. 8th, 2016, Colloquium, South China University of Technology, Guangzhou, China.

36. Jul. 5th, 2016, Colloquium on Modern Mathematics, Shantou University, Shantou, China.

35. Apr. 13th, 2016, Colloquium, University of Maryland, College Park, MD.

34. Mar. 10th, 2016, Analysis Seminar, University of Illinois, Urbana-Champaign, IL.

33. Dec. 2015, SIAM Conference on Analysis of Partial Differential Equations, Scottsdale, AZ

32. Nov. 20th, 2015, Analysis Seminar, University of Toronto, Toronto, Canada.

31. Nov. 6th, 2015, Analysis Seminar, National Cheng Kung University, Taiwan.

30. Nov. 4th, 2015, Colloquium, National Tsing Hua University, Taiwan.

29. Nov. 2nd, 2015, International Conference on Nonlinear Analysis in Hornor of Tai-Ping Liu's 70th Birthday, Academia Sinica, Taiwan.

28. Feb. 6th, 2015, Colloquium, University of Cincinnati, Cincinnati, OH

27. Feb. 3rd, 2015, Colloquium, University of Arizona, Tucson, AZ

26. Jan. 26th, 2015, Colloquium, Michigan State University, East Lansing, MI

25. Jan. 22nd, 2015, Colloquium, University of Rochester, Rochester, NY

24. Dec. 10th, 2014, BU/Brown PDE Seminar, Boston University, Boston, MA.

23. Nov. 17th, 2014, Analysis Seminar, Princeton University, Princeton, NJ.

22. Nov. 14th, 2014, Analysis and PDE Seminar, University of California, Los Angeles, CA.

21. Oct. 13th, 2014, PDE and Geometric Analysis Seminar, University of Wisconsin, Madison, WI.

20. Oct. 7th, 2014, PDE Seminar, Georgia Tech, Atlanta, GA.

19. Sep. 12th, 2014, PDE Seminar, Brown University, Providence, RI.

18. Mar. 4th, 2014, Analysis/PDE Seminar, MIT, Cambridge, MA.

17. Dec. 7th, 2013, 2013 SIAM Conference on Analysis of PDE, Lake Buena Vista, FL.

16. Oct. 10th, 2013, PDE/Applied Math Seminar, University of Maryland, College Park, MD.

15. Oct. 2nd, 2013, Physics Colloquium, University of Massachusetts Boston, Boston, MA.

14. Sep. 13th, 2013, PDE Seminar, Brown University, Providence, RI.

13. Feb. 6th, 2013, Mathematical Physics & Probability Seminar, University of California, Davis, CA.

12. Feb. 4th, 2013, PDE/Analysis Seminar, University of California, Berkeley, CA.

11. Feb. 1th, 2013, PDE Seminar, Brown University, Providence, RI.

10. Oct. 23rd, 2012, BU/Brown PDE Seminar, Brown University, Providence, RI.

9. May 23rd, 2012, PDE Seminar, Tsinghua University, Beijing, China.

8. Mar. 22th, 2012, Department Colloquium, Georgia Southern University, Statesboro, GA.

7. Mar. 18th, 2012, 2012 Spring Eastern AMS Sectional Meeting, George Washington University, Washington, DC.

6. Jan. 17th, 2012, Harmonic Analysis and Differential Equations Seminar, University of Illinois, Urbana, IL.

5. Nov. 30th, 2011, Analysis Seminar, University of Texas, Austin, TX.

4. May 5th, 2011, PDE/Applied Math Seminar, University of Maryland, College Park, MD.

3. March 14th, 2011, Applied PDE RIT, University of Maryland, College Park, MD.

2. May 21st, 2010, Analysis Seminar, SUNY Stony Brook, Stony Brook, NY.

1. April 22nd, 2010, Analysis Seminar, Georgia Southern University, Statesboro, GA.

Contributed Presentations

2. March 17th, 2011, 27th Southeastern Analysis Meeting, University of Florida, Gainesville, FL.

1. March 26th, 2010, 26th Southeastern Analysis Meeting, Georgia Institute of Technology, Atlanta, GA.

Teaching Experiences[1]

35. Fall 2024, Instructor of MATH210 (Introduction to Financial Mathematics). University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.33.

34. Fall 2024, Instructor of MATH265H (Functions of a Real Variable (Honors)), University of Rochester. Course Evaluation (5 is best, 1 is worst): 5.00.

33. Spring 2024, Instructor of MATH282 (Introduction to Complex Variables with Applications). University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.89.

32. Spring 2024, Instructor of MATH285 (Methods of Applied Mathematics). University of Rochester. Course Evaluation (5 is best, 1 is worst): 5.00.

31. Fall 2023, Instructor of MATH463 (Graduate PDE). University of Rochester. Course Evaluation (5 is best, 1 is worst): Class size too small to report.

30. Spring 2022, Instructor of MATH565 (Topic in PDE). University of Rochester. Course Evaluation (5 is best, 1 is worst): Class size too small to report.

29. Fall 2021, Instructor of MATH472 (Analysis III). University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.00; COVID Related Course Evaluation: 4.67.

[1]Detailed course evaluation results available upon request.

28. Fall 2021, Instructor of MATH265H (Functions of a Real Variable (Honors)), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.75; COVID Related Course Evaluation: 4.75.

27. Spring 2021, Instructor of MATH210 (Introduction to Financial Mathematics). University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.71; COVID Related Course Evaluation: 4.54.

26. Spring 2021, Instructor of MATH463 (Graduate PDE). University of Rochester. Course Evaluation (5 is best, 1 is worst): Class size too small to report.

25. Fall 2020, Instructor of MATH265H (Functions of a Real Variable (Honors)), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.00; COVID Related Course Evaluation: 4.54.

24. Spring 2020, Instructor of MATH565 (Topic in PDE). Course Evaluation (5 is best, 1 is worst): Class size too small to report.

23. Spring 2020, Instructor of MATH285 (Methods of Applied Mathematics), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.93.

22. Fall 2019, Instructor of MATH165 (Linear Algebra with Differential Equations), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.06

21. Spring 2019, Instructor of MATH285 (Methods of Applied Mathematics), University of Rochester. Course Evaluation (5 is best, 1 is worst): 5.00.

20. Spring 2019, Instructor of MATH472 (Graduate Functional Analysis), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.63.

19. Fall 2018, Instructor of MATH463 (Graduate PDE). University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.71.

18. Spring 2018, Instructor of MATH165 (Linear Algebra with Differential Equations), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.19.

17. Fall 2017, Course Head and Instructor of MATH164 (Multidimensional Calculus), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.11.

16. Fall 2017, Instructor of MATH265H (Functions of a Real Variable (Honors)), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.26.

15. Spring 2017, Course Head and Instructor of MATH164 (Multidimensional Calculus), University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.43.

15. Fall 2016, Instructor of MATH463 (Graduate PDE). University of Rochester. Course Evaluation (5 is best, 1 is worst): 5.00.

14. Fall 2016, Instructor of MATH265H (Functions of a Real Variable (Honors)). University of Rochester. Course Evaluation (5 is best, 1 is worst): 4.6.

13. Spring 2016, Instructor of MATH565 (Topic in PDE). Course Evaluation (5 is best, 1 is worst): 5.00.

12. Fall 2015, Instructor of MATH265 (Functions of a Real Variable), University of Rochester. Course Evaluation (5 is best, 1 is worst): 3.99.

11. Fall 2015, Instructor of MATH164 (Multidimensional Calculus), University of Rochester. Course Evaluation (5 is best, 1 is worst): 3.96.

10. Spring 2015, Instructor of MATH1010 (Advanced Calculus I), Brown University. Course Evaluation (1 is best, 5 is worst): 1.89 for Section 01.

9. Fall 2014, Course Head and Instructor of MATH0180 (Intermediate Calculus / Calculus III), Brown University. Course Evaluation (1 is best, 5 is worst): 1.46 for Section 02; 1.66 for Section 03.

8. Spring 2014, Instructor of MATH0540 (Honors Linear Algebra), Brown University. Course Evaluation (1 is best, 5 is worst): 1.45 for Section 02.

7. Fall 2013, Course Head and Instructor of MATH0180 (Intermediate Calculus / Calculus III), Brown University. Course Evaluation (1 is best, 5 is worst): 1.42 for Section 01; 1.35 for Section 03.

6. Spring 2013, Instructor of MATH0180 (Intermediate Calculus / Calculus III), Brown University. Course Evaluation (1 is best, 5 is worst): 1.58 for Section 03.

5. Fall 2012, Instructor of MATH0180 (Intermediate Calculus / Calculus III), Brown University. Course Evaluation (1 is best, 5 is worst): 1.69 for Section 01; 1.44 for Section 02.

4. Spring 2011, Discussion Sessions for MATH241 (Calculus III), University of Maryland. Course Evaluation (4 is best, 0 is worst): 3.68 for Section 0131; 3.88 for Section 0141.

3. Fall & Spring 2010, Review Sessions for the PDE Ph.D. Qualifying Exam and MATH673, 674 (Graduate PDE I, II), University of Maryland.

2. Spring 2007, High School Algebra, Affiliated High School of Hunan University, China.

1. Spring 2005, College Physics, Hunan University, China.

AWARDS AND HONORS

11. 2011 - 2012, Ann G. Wylie Dissertation Fellowship, University of Maryland.

10. 2011 - 2012, John Osborn Summer Fellowship, University of Maryland.

9. 2009 - 2012, Kaplan Travelling Fellowship, University of Maryland.

8. June 2008, Evolution Equations Summer School Scholarship, Clay Mathematics Institute.

7. 2007 - 2009, Block Grant Fellowship, University of Maryland.

6. August 2007, CMPS Dean's Fellowship, University of Maryland.

5. August 2007, Excellent Academic Award, University of Maryland.

4. June 2007, 1st Class Excellent Thesis Award, Hunan University, China.

3. 2005 - 2006, Tianyu Special Fellowship, Hunan University, China.

2. 2005 - 2006, 2nd Class Award, Hunan University, China.

1. 2004 - 2005, Monomial Fellowship, Hunan University, China.