Wenbin Luo

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Postdoc

Research interests

Arakelov geometry, diophantine approximation, unlikely intersection, arithmetic dynamical systems, and representation theory

Working experience

Jul. 2023- Postdoc at Beijing International Center for Mathematical Research under the su-Now pervision of Prof. Xinyi Yuan.

Education

Apr. 2020 Department of Mathematics, Kyoto University, Japan.

- to Mar. 2023 Ph.D under the supervision of Prof. Atsushi Moriwaki.
 - Research Fellowship for Young Scientists(DC1) of Japan Society for the Promotion of Science.

Apr. 2018 Department of Mathematics, Kyoto University, Japan.

- to Mar. 2020 o Master under the supervision of Prof. Atsushi Moriwaki.
 - Scholarships or Awards:
 - Asian Future Leadership Scholarship.

Sep. 2013 Department of Mathematics, Fudan University, China.

- to Jun. 2017 Bachelor.
 - Member of Talents Project.

Publications

- W. Luo, "A relative bigness inequality and equidistribution theorem over function fields," *International Journal of Number Theory*, vol. 21, no. 02, pp. 487–514, 2025. [Online]. Available: https://doi.org/10.1142/S1793042125500241.
- [2] —, "Slope boundedness and equidistribution theorem," Int. Math. Res. Not. IMRN, no. 12, pp. 9588-9606, 2024. [Online]. Available: https://doi.org/10.1093/imrn/rnae057.

Preprints

[3] W. Luo and J. Yu, "Geometric bogomolov conjecture for semiabelian varieties," in preparation, 2025.

- [4] W. Luo and J. Song, "Arithmetic degrees of dynamical systems over fields of characteristic zero," 2024, [Online]. Available: https://arxiv.org/abs/2401.11982.
- [5] Y. Fan, W. Luo, and B. Qu, "Height filtrations and base loci on flag bundles over a curve," 2024, [Online]. Available: https://arxiv.org/abs/2403.06808.
- [6] W. Luo, "Continuous extension and birational invariance of chi-volume over an adelic curve," 2023, [Online]. Available: https://arxiv.org/abs/2303.01604.
- [7] —, "The continuity of χ-volume functions over adelic curves," 2020, [Online]. Available: https://arxiv.org/abs/2003.09837.
- [8] —, "Arithmetic over trivially valued field and its applications," 2020, [Online]. Available: https://arxiv.org/abs/2009.08663.

Teaching Experience

Apr. 2020 - Jun. 2020	Teaching assistant in Basics of Modern Mathematics A for Bachelors, 75 hrs
Oct. 2020 - Jan. 2021	Teaching assistant in Algebra II for Bachelors, 75 hrs
Apr. 2021 - Jun. 2021	Teaching assistant in Basics of Modern Mathematics A for Bachelors, 75 hrs
Oct. 2021 - Jan. 2022	Teaching assistant in Algebra II for Bachelors, 75 hrs
Oct. 2022 - Jan. 2023	Teaching assistant in Algebra II for Bachelors, 75 hrs
	Talks

- Mar. 2025 Geometric Bogomolov conjecture for semiabelian varieties. Diophantine Days, Westlake University, Hangzhou, China.
- Nov. 2024 Geometric Bogomolov conjecture for semiabelian varieties. Seminar on Nevalinna Theory and Arakelov Geometry, China.
- Dec. 2023 Arakelov geometry for flag varieties over function fields. BICMR postdoc Seminar. Peking University, Beijing, China.
- Jan. 2023 Arithmetic Hilbert-Samuel and equidistribution theorems. NCTS East Asia Core Doctoral Forum in Mathematics. Online.
- Mar. 2022 A relative bigness inequality and equidistribution theorem over function fields. Seminar - New Adic and Algebraic Directions in Motivic Homotopy Theory. Online.
- Sep. 2022 A relative bigness inequality and equidistribution theorem over function fields. Intercity Seminar on Arakelov Geometry 2022. ICMAT, Madrid, Spain.
- Jul. 2022 A relative bigness inequality over function fields. Kinosaki Symposium on Algebraic Geometry 2022. Kinosaki, Japan.
- May 2020 The continuity of χ -volume over adelic curves. 2nd Kyoto-Hefei Workshop on Arithmetic Geometry. Kyoto University, Kyoto Japan.