Shijie Bao (包诗界)

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Place of birth: Anhui, China ✻ *Date of birth:* 03-Sep.-1996 ✻ *Gender:* Female

Education

Doctorate degree in Mathematics — *Peking University*

School of Mathematical Sciences — *September 2017 - June 2022*

Advisor: Prof. Qi'an Guan

Thesis title: L^2 extension and effectiveness of strong openness property

Bachelor's degree in Mathematics — *University of Science and Technology of China*

School of Mathematical Sciences — *September 2013 - June 2017*

Thesis title: Hörmander's L^2 theorem for Dirac operator in complex Clifford analysis

Work experiences

Academy of Mathematics and Systems Science,
Chinese Academy of Sciences — *July 2022 - Now*

Postdoctoral fellow — *Beijing, China*

Host professor: Prof. Xiangyu Zhou

Research interests

Primary My work is mainly about L^2 methods in several complex variables, especially on Bergman kernel theory, optimal L^2 extension theorem, multiplier ideal sheaves, and so on.

Secondary I'm also interested in complex geometry, algebraic geometry, and number theory, particularly in which related to the theory of several complex variables.

Publications

L^2 extension and effectiveness of strong openness property

Acta Mathematica Sinica, English Series, 2022, 38(11): 1949-1964.

Authors: Shijie Bao and Qi'an Guan

L^2 extension and effectiveness of L^p strong openness property

Acta Mathematica Sinica, English Series, 2023, 39(5): 814-826.

Authors: Shijie Bao and Qi'an Guan

Concavity property of minimal L^2 integrals with Lebesgue measurable gain V –fibrations over open Riemann surfaces

The Journal of Geometric Analysis, 2023, 33(6): 179.

Authors: Shijie Bao, Qi'an Guan and Zheng Yuan

Modules at boundary points, fiberwise Bergman kernels, and log-subharmonicity

Peking Mathematical Journal, 2023: 1-30. Published online.

Authors: Shijie Bao and Qi'an Guan

A note on ξ−Bergman kernels

Front. Math (2024). Published online, https://doi.org/10.1007/s11464-023-0021-1.

Authors: Shijie Bao, Qi'an Guan and Zheng Yuan

Concavity property of minimal L^2 integrals with Lebesgue measurable gain VII - Negligible weights

In: Hirachi, K., Ohsawa, T., Takayama, S., Kamimoto, J. (eds) The Bergman Kernel and Related Topics. HSSCV 2022. Springer Proceedings in Mathematics & Statistics, vol 447. Springer, Singapore (2024).

Authors: Shijie Bao, Qi'an Guan, Zhitong Mi and Zheng Yuan

Preprints

Concavity property of minimal L^2 integrals with Lebesgue measurable gain VI: fibrations over products of open Riemann surfaces

Preprint. arXiv: 2211.05255.

Authors: Shijie Bao, Qi'an Guan and Zheng Yuan

Boundary points, minimal L^2 integrals and concavity property

Preprint. arXiv: 2203.01648.

Authors: Shijie Bao, Qi'an Guan and Zheng Yuan

Modules at boundary points, fiberwise Bergman kernels, and log-subharmonicity II – on Stein manifolds

Preprint. arXiv: 2205.08044.

Authors: Shijie Bao and Qi'an Guan

Fiberwise Bergman kernels, vector bundles, and log-subharmonicity

Preprint. arXiv: 2210.16601.

Authors: Shijie Bao and Qi'an Guan

The log-plurisubharmonicity of fiberwise ξ−Bergman kernels for variant functional

Preprint. arXiv: 2303.16525.

Authors: Shijie Bao, Qi'an Guan and Zheng Yuan

Concavity property of minimal L^2 integrals with Lebesgue measurable gain VIII – partial linearity and log-concavity

Preprint. arXiv: 2307.07112.

Authors: Shijie Bao, Qi'an Guan and Zheng Yuan

Tame maximal weights, relative types and valuations

Preprint. arXiv: 2310.00368.

Authors: Shijie Bao, Qi'an Guan, Zhitong Mi and Zheng Yuan

On the multipoled global Zhou weights and semi-continuity for Zhou numbers

Preprint. arXiv: 2311.06459.

Authors: Shijie Bao, Qi'an Guan, Zhitong Mi and Zheng Yuan

Teaching assistants experiences

Functional Analysis (I)	February 2018 - June 2018, Peking University
Mathematical Analysis (I)	September 2018 - January 2019, Peking University
Mathematical Analysis (II)	February 2019 - June 2019, Peking University
Mathematical Analysis (III)	September 2019 - January 2020, Peking University
Mathematical Analysis (I) Honor	September 2020 - January 2021, Peking University
Mathematical Analysis (II) Honor	February 2021 - June 2021, Peking University

Invited talks on conferences

HAYAMA Symposium on Complex Analysis in Several Variables XXIV

Hayama, Japan *July 15th –July 18th, 2023*

- Title of talk: An optimal L^2 extension approach to the effectiveness result of strong openness property

Young Mathematicians Workshop on Several Complex Variables 2023

Pusan, Republic of Korea *August 9th - August 11th, 2023*

- Title of talk: Generalized Bergman kernels, optimal L^2 extension, and strong openness property

National Several Complex Variables Annual Conference

Wuhan, China *August 17th - August 21th, 2023*

- Title of talk: Optimal L^2 extension and effectiveness result of strong openness property

Seminar of Progress on Analytic Minimal Model Program

Kunming, China *October 15th - October 21th, 2023*

- Title of talk: Tame maximal weights with tropically multiplicative and additive relative types

Youth Forum on Complex Geometry

Wuhan, China *November 24th - November 27th, 2023*

- Title of talk: A class of tame maximal weights measuring the singularities of plurisubharmonic functions

Social services

I am working as a reviewer of Mathematical Reviews of American Mathematical Society.

Language proficiencies

Chinese	Native
English	Fluent
Japanese	Intermediate