

Baojun Wu

Postdoctoral Researcher, Beijing International Center for Mathematical Research (BICMR), Peking University

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Research Interests

Liouville conformal field theory (LCFT); Liouville quantum gravity (LQG); Schramm-Loewner evolution (SLE); Statistical physics; Mathematical physics.

Employment

Boya Postdoctoral Researcher, BICMR, Peking University 2023.10–present

Research Visits

Institut des Hautes Études Scientifiques (IHÉS) Visiting student, Jan–Feb 2023
Institute for Advanced Study (IAS) Visiting student, Sep–Dec 2022

Education

Ph.D. in Mathematics, Université Aix–Marseille 2020–2023
Advisor: Rémi Rhodes
M.Sc. in Probability, Université Paris–Saclay 2019–2020
Advisor: Vincent Vargas
Normalien, École normale supérieure (Ulm) 2017–2020
B.Sc. in Mathematics, Taishan College, Shandong University 2014–2018

Publications and Preprints

- G. Baverez, **B. Wu**. *Irreducibility of Virasoro representations in Liouville CFT*, (to appear in Annals of Probability), [arXiv:2312.07344](https://arxiv.org/abs/2312.07344), 2023.
- C. Guillarmou, R. Rhodes, **B. Wu**. *Conformal Bootstrap for surfaces with boundary in Liouville CFT. Part 1: Segal axioms* (To appear in Transactions of AMS), [arXiv:2408.13133](https://arxiv.org/abs/2408.13133), 2024.
- M. Ang, G. Cai, X. Sun, **B. Wu**. *Integrability of Conformal Loop Ensemble: Imaginary DOZZ Formula and Beyond* (Submitted to JAMS, in revision), [arXiv:2107.01788](https://arxiv.org/abs/2107.01788), 2024.
- T. Liu, S. Ming, X. Sun, **B. Wu**, T. Yang. *Turaev–Viro invariant from the modular double of $U_q\mathfrak{sl}(2; \mathbb{R})$* (preprint), [arXiv:2508.05120](https://arxiv.org/abs/2508.05120), 2025.
- G. Cai, H. Liu, **B. Wu**, Z. Zhuang. *Three-point connectivity constant for q -state Potts spin clusters* (submitted), [arXiv:2510.05850](https://arxiv.org/abs/2510.05850), 2025.

- H. Liu, **B. Wu**, Z. Zhuang. *Mixing rate exponent of planar Fortuin–Kasteleyn percolation* (submitted), [arXiv:2502.09950](#), 2025.
- M. Ang, G. Cai, X. Sun, **B. Wu**. *SLE Loop Measure and Liouville Quantum Gravity* (submitted), [arXiv:2409.16547](#), 2024.
- G. Baverez, **B. Wu**. *Higher equations of motion at level 2 in Liouville CFT* (Probability and Mathematical Physics, Revision Submitted), [arXiv:2312.13900](#), 2023.
- **B. Wu**. *Conformal Bootstrap on the Annulus in Liouville CFT* (Communications in Mathematical Physics, Revision Submitted), [arXiv:2203.11830](#), 2022.

Selected Talks

- *CFT: Algebraic, Topological and Probabilistic approaches in Conformal Field Theory*, Institut Pascal (Sep 2025).
Talk: “Turaev–Viro invariant from the modular double of $U_q(\mathfrak{sl}(2; \mathbb{R}))$.”
- *Intersections of Topological Recursion, Conformal Field Theory and Random Geometry*, SwissMAP Research Station, Les Diablerets (Aug 2025).
Talk: “Proof of the Delfino–Viti conjecture.”
- *Probabilistic methods in quantum field theory*, Hausdorff Center for Mathematics, University of Bonn (May 2025).
Talk: “Integrability of Conformal Loop Ensemble: Imaginary DOZZ Formula and Beyond.”
- *Probability in Conformal Field Theory*, Bernoulli Center (EPFL) (Apr 2024).
Talk: “Proof of the Delfino–Viti conjecture.”
- *1st NYUSH–Peking–Westlake Joint Conference on Probability*, Hangzhou (Mar 2024).
Talk: “Irreducibility of Liouville theory.”
- *Random Geometry and Statistical Physics*, University of Pennsylvania (Oct 2022).
Talk: “Conformal loop ensemble and matrix model.”