

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

Postdoctoral Researcher, BICMR, Peking University

2023–present

Research Visits

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, 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), [arXiv:2107.01788](https://arxiv.org/abs/2107.01788), 2024.
- 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](https://arxiv.org/abs/2502.09950), 2025.

- T. Liu, S. Ming, X. Sun, **B. Wu**, T. Yang. *Turaev–Viro invariant from the modular double of $U_q\mathfrak{sl}(2;\mathbb{R})$* (submitted), [arXiv:2508.05120](https://arxiv.org/abs/2508.05120), 2025.
- M. Ang, G. Cai, X. Sun, **B. Wu**. *SLE Loop Measure and Liouville Quantum Gravity* (submitted), [arXiv:2409.16547](https://arxiv.org/abs/2409.16547), 2024.
- G. Baverez, **B. Wu**. *Higher equations of motion at level 2 in Liouville CFT* (submitted), [arXiv:2312.13900](https://arxiv.org/abs/2312.13900), 2023.
- **B. Wu**. *Conformal Bootstrap on the Annulus in Liouville CFT* (submitted), [arXiv:2203.11830](https://arxiv.org/abs/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 NYU SH–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.”