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Nota di contenuto	Cover -- Title page -- Chapter 1. Introduction -- 1.1. Kardar-Parisi-Zhang universality -- 1.2. A conceptual overview of the scaled Brownian last passage percolation study -- 1.3. Non-intersecting line ensembles and their integrable and probabilistic analysis -- 1.4. The article's main results -- Chapter 2. Brownian Gibbs ensembles: Definition and statements -- 2.1. Preliminaries: Bridge ensembles and the Brownian Gibbs property -- 2.2. Statements of principal results concerning regular ensembles -- 2.3. Some generalities: Notation and

basic properties of Brownian Gibbs ensembles -- Chapter 3. Missing closed middle reconstruction and the Wiener candidate -- 3.1. Close encounter between finitely many non-intersecting Brownian bridges -- 3.2. The reconstruction of the missing closed middle -- 3.3. Applications of the Wiener candidate approach -- Chapter 4. The jump ensemble method: Foundations -- 4.1. The jump ensemble method -- 4.2. General tools for the jump ensemble method -- Chapter 5. The jump ensemble method: Applications -- 5.1. Upper bound on the probability of curve closeness over a given point -- 5.2. Closeness of curves at a general location -- 5.3. Brownian bridge regularity of regular ensembles -- Appendix A. Properties of regular Brownian Gibbs ensembles -- A.1. Scaled Brownian LPP line ensembles are regular -- A.2. The lower tail of the lower curves -- A.3. Regular ensemble curves collapse near infinity -- Bibliography -- Back Cover.

Sommario/riassunto

"The Airy line ensemble is a positive-integer indexed system of random continuous curves whose finite dimensional distributions are given by the multi-line Airy process. It is a natural object in the KPZ universality class: for example, its highest curve, the Airy₂ process, describes after the subtraction of a parabola the limiting law of the scaled energy of a geodesic running from the origin to a variable point on an anti-diagonal line in such problems as Poissonian last passage percolation. The ensemble of curves resulting from the Airy line ensemble after the subtraction of the same parabola enjoys a simple and explicit spatial Markov property, the Brownian Gibbs property. In this paper, we employ the Brownian Gibbs property to make a close comparison between the Airy line ensemble's curves after affine shift and Brownian bridge, proving the finiteness of a superpolynomially growing moment bound on Radon-Nikodym derivatives. We also determine the value of a natural exponent describing in Brownian last passage percolation the decay in probability for the existence of several near geodesics that are disjoint except for their common endpoints, where the notion of 'near' refers to a small deficit in scaled geodesic energy, with the parameter specifying this nearness tending to zero. To prove both results, we introduce a technique that may be useful elsewhere for finding upper bounds on probabilities of events concerning random systems of curves enjoying the Brownian Gibbs property. Several results in this article play a fundamental role in a further study of Brownian last passage percolation in three companion papers (Hammond 2017a,b,c), in which geodesic coalescence and geodesic energy profiles are investigated in scaled coordinates"--
