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Titolo	Reflected Brownian motions in the KPZ universality class / / by Thomas Weiss, Patrik Ferrari, Herbert Spohn
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- One-sided reflected Brownian motions and related models -- Skorokhod construction -- Packed initial conditions -- Infinite particle systems -- Determinantal point processes -- Definition -- Fredholm determinants -- Correlation kernel -- Strategy for future proofs.-Airy processes.-Elementary Airy processes -- Crossover Processes -- Variational identities -- Gaussian fluctuations of the Airy_stat process -- Packed and Periodic initial conditions -- Packed initial conditions -- Periodic initial conditions -- Stationary initial conditions -- Poisson initial conditions -- Determinantal structure -- Asymptotic analysis -- Path-integral style formula -- Analytic continuation -- More general initial conditions and their asymptotics -- Half-Periodic initial conditions -- Half-Poisson initial conditions -- Poisson-Periodic initial conditions -- Attractiveness and a more general class of initial data -- Asymptotics along space-like paths and slow decorrelations -- References.
Sommario/riassunto	This book presents a detailed study of a system of interacting Brownian motions in one dimension. The interaction is point-like such that the

n-th Brownian motion is reflected from the Brownian motion with label n-1. This model belongs to the Kardar-Parisi-Zhang (KPZ) universality class. In fact, because of the singular interaction, many universal properties can be established with rigor. They depend on the choice of initial conditions. Discussion addresses packed and periodic initial conditions (Chapter 5), stationary initial conditions (Chapter 6), and mixtures thereof (Chapter 7). The suitably scaled spatial process will be proven to converge to an Airy process in the long time limit. A chapter on determinantal random fields and another one on Airy processes are added to have the notes self-contained. These notes serve as an introduction to the KPZ universality class, illustrating the main concepts by means of a single model only. The notes will be of interest to readers from interacting diffusion processes and non-equilibrium statistical mechanics.