Absorption times for discrete Whittaker processes and non-intersecting Brownian bridges

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It is well known that twice the square of the maximum of a reflected Brownian bridge, starting and ending at zero, has the same distribution as the random variable $S=\sum_{n=1}^\infty \frac{e_n}{n^2}$, where $e_1, e_2, \ldots$ is a sequence of independent standard exponential random variables, and that twice the square of the maximum of a standard Brownian excursion (i.e. a Brownian bridge, starting and ending at zero, conditioned to stay positive) has the same distribution as $S+S'$, where S' is an independent copy of S. (The random variables S and $S+S'$ are in fact closely related to the Riemann zeta function.) In this talk, I will present a conjectural generalisation of these identities in law, which relates maximal heights of non-intersecting reflected Brownian bridges and non-intersecting Brownian excursions to absorption times for discrete Whittaker processes. The latter are a family of Markov chains on reverse plane partitions which are closely related to the Toda lattice. This work is motivated by an attempt to understand the large scale behaviour of discrete Whittaker processes, in particular the question of whether they belong to the KPZ universality class, which we now conjecture to be the case based on this apparent connection with non-intersecting Brownian bridges.