

Title: On the supremum of iterated local time

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We obtain upper and lower class integral tests for the space-wise supremum of the iterated local time of two independent Wiener processes. We then establish a strong invariance principle between this iterated local time and the local time process of the simple symmetric random walk on the two-dimensional comb lattice. The latter, in turn, enables us to conclude upper and lower class tests for the local time of simple symmetric random walk on the two-dimensional comb lattice as well.

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