

ATELIER « SYSTÈMES STOCHASTIQUES DE PARTICULES EN INTERACTION »
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WORKSHOP “INTERACTING STOCHASTIC PARTICLE SYSTEMS”
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Random Processes and Integrable Systems

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We shall consider various models of random turn motion suggested by M.E. Fisher and show that the analogue of the partition functions for these models coincides with tau functions of the Kadomtsev–Petviashvili equation related to the root system B (BKP). BKP higher times govern the hopping rates of the particles. We shall present asymptotic shape configuration for these models in the large time limit. We use the fermionic construction of tau functions, symmetric functions and Young diagrams.

Based on joint works with J. Harnad.