



Dynamics of turbulent sediment transport : experiments and modeling

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We report the results of a grain-scale investigation of bedload transport in a small experimental river. The trajectories of the grains were visualized using a high-speed video imaging system. From these measurements, the velocity and surface density of the moving grains were derived, together with the lengths and durations of the saltation flights. An analysis of these results within the frame of an erosion-deposition model is proposed, with the introduction of relaxation effects in the particle flux.