

Abstract Submitted
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Near-bed particle motion due to turbulent flow using image-processing techniques ANINDITA BHATTACHARYA, B.S. MAZUMDER, SATYA P. OJHA, Indian Statistical Institute — This study investigates the behavior of particle motion over the rough bed surface due to near-bed turbulence in an open channel flow using image processing techniques. The instantaneous fluid velocity components are measured by 16MHz 3D-Micro acoustic Doppler velocimeter (**ADV**). High-speed Motion-Scope (**HSMS**) system has been used to record the motion-picture photography of the particles movement on the surface of the rough bed at the rate of 250 frames/sec. The recorded images are analyzed in the light of particle motions, trajectories, saltation heights and lengths of individual particles, angles of orientation and their interactions with the boundary using digital image processing techniques with the help of the software Image Pro-Plus (IPP).

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