



## Landslides along the rivers of Nizhny Novgorod region

Irina Nikolkina (1,2), Ira Didenkulova (1,2), Efim Pelinovsky (2,3)

(1) Institute of Cybernetics, Laboratory of Wave Engineering, Tallinn, Estonia (ira@cs.ioc.ee, +372 6204151), (2) Nizhny Novgorod State Technical University, Nizhny Novgorod, Russia, (3) Institute of Applied Physics, Nizhny Novgorod, Russia

Landslides occurred in steep river banks and entering water are able to generate local tsunamis in the river, which can result in the strong impact on coasts and coastal structures. During last 13 years at least 16 tsunamis were generated by landslides worldwide. Cities located on the rivers banks are exposed to underestimated tsunami danger. The first described event of this type occurred in Russia (Nizhny Novgorod) in XVI century, when the whole monastery slid down into the river and induced a local tsunami which penetrated at least 50 m inland. The current situation of landslide occurrence along water basins of Nizhny Novgorod region, Russia is specially discussed, and the possibility of tsunami generation is studied. It is shown that in 2001 – 2011 years, 15 landslides along river water reservoirs (mainly Oka and Volga rivers) were documented and one of them, which occurred in Gorbatov in 2001, slid into the water and induced tsunami.