



## **SPH3D simulation of the tsunamis of December 30, 2002 at Stromboli volcano, Italy**

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A lagrangian and three dimensional Smoothed Particle Hydrodynamic (SPH3D) numerical model has been used to simulate the generation and propagation of a tsunamis wave triggered by a landslide sliding down the Sciara del Fuoco at Stromboli volcano, assuming the features of the landslide movement occurred on 30th December 2002. The model has proven to be particularly suited to simulate also the interaction of the generated impulse wave with the shoreline, where runup is mainly generated by edge waves. At this aim, the numerical model has been calibrated using results from an experimental study on landslide generated edge waves, carried out at the LIAM laboratory of L'Aquila University.

SPH3D results have been compared to runup observed after the 30th December 2002 event, showing a very satisfactorily agreement.