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Numerical modelling of gravel unconstrained flow experiments with the DAN<sup>3D</sup> and RASH<sup>3D</sup> codes

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## **ACCEPTED MANUSCRIPT**

Numerical modelling of gravel unconstrained flow experiments with the DAN<sup>3D</sup> and RASH<sup>3D</sup> codes

Claire Sauthier<sup>1</sup>, Marina Pirulli<sup>2</sup>, Gabriele Pisani<sup>1,2</sup>, Claudio Scavia<sup>2</sup>, Vincent Labiouse<sup>1</sup>

1) École Polytechnique Fédérale de Lausanne (EPFL), School of Architecture, Civil and Environmental Engineering (ENAC), Laboratory for Rock Mechanics (LMR), Switzerland

2) Politecnico di Torino, Department of Structural, Geotechnical and Building Engineering, Turin, Italy

Corresponding Author:

Marina Pirulli

Department of Structural, Geotechnical and Building Engineering, Politecnico di Torino,

Corso Duca degli Abruzzi, 24, 10129 Torino, ITALY.

Tel: +39 011 564 4865

Fax: +39 011 564 4899

Email: marina.pirulli@polito.it

## Abstract

Landslide continuum dynamic models have improved considerably in the last years, but a consensus on the best method of calibrating the input resistance parameter values for predictive analyses has not yet emerged. In the present paper, numerical simulations of a series of laboratory experiments performed at the Laboratory for Rock Mechanics of the EPF Lausanne were undertaken with the RASH<sup>3D</sup> and DAN<sup>3D</sup> numerical codes. They aimed at analysing the possibility to use calibrated ranges of parameters 1) in a code different from that they were obtained from and 2) to simulate potential-events made of a material with the

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