

# SOME EXPLANATIONS REGARDING THE DATA IN THIS FOLDER

24 septembre 2018

The present directory ("PedestrianTrajectories") collects the trajectory data collected during the 2017 controlled experiments conducted by Cécile APPERT-ROLLAND and Alexandre NICOLAS in the frame of the project Perce-Foule (Labex PALM, CNRS / Univ. Paris-Sud). These experiments are described in the following publications :

\* Appert-Rolland, Cécile, Pettré, Julien, Olivier, Anne-Hélène, Warren, William, Duigou-Majumdar, Aymeric, Pinsard, Étienne, Nicolas, Alexandre, «Experimental Study of Collective Pedestrian Dynamics», to be published in the Proceedings of the 9<sup>th</sup> International Conference on Pedestrian and Evacuation Dynamics (2018).

\* Nicolas, Alexandre, Kuperman, Marcelo, Ibañez, Santiago, Bouzat, Sebastian, Appert-Rolland, Cécile, "Mechanical response of dense static crowds to the crossing of intruders", submitted.

You are more than welcome to use our data, but the above publications should be duly cited if the data are used for an academic publication or a technical report.

The present directory has the following structure (arborescence) :

**PedestrianTrajectories** >> **%intruder type%** >> **%crowd orientation%** >> **%crowd density%** >> >> **%experiment number%** >> **%pedestrian number%**

where **%intruder type%** should be replaced by the nature of the intruder : "CylinderCrossings" for the cylindrical intruder or "PedestrianCrossings" for crossings by single pedestrians,

**%crowd orientation%** should be replaced by the orientation of the crowd : "FacingIntruder" for crowds facing the intruder or "RandomOrientation" for randomly oriented participants,

**%crowd density%** should be replaced by the density of the crowd : "Sparse" for a density around 1.5-2 ped/m<sup>2</sup>, "FairlyDense" for a density around 2.5 ped/m<sup>2</sup>, "Dense" for a density around 3.5 ped/m<sup>2</sup>, "VeryDense" for a density around 6 ped/m<sup>2</sup>,

**%experiment number%** is the label that we gave to the experiment,

**%pedestrian number%** denotes the tag number assigned to the detected pedestrian by our tracking software.

Each trajectory file **%pedestrian number%** contains three columns of data :

**time x y**

where the first column (**time**) refers to time in seconds,

the second column (**x**) is the x-coordinate (in m) of the estimated midpoint between the pedestrian's feet (based on the head's position) at that time,

and the third column (**y**) is the y-coordinate at that time.

Coordinates  $(x,y) = (-1.0, -1.0)$  are indicated whenever the pedestrian was not detected at that time (or was out of bounds).