# Fundamental diagram in the contex of the Social Force Model

### I.M. Sticco and F.E. Cornes

Departamento de Física, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Pabellón I, Ciudad Universitaria, 1428 Buenos Aires, Argentina.

#### G.A. Frank

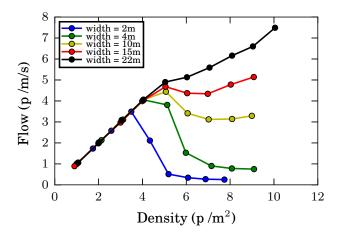
Unidad de Investigación y Desarrollo de las Ingenierías, Universidad Tecnológica Nacional, Facultad Regional Buenos Aires, Av. Medrano 951, 1179 Buenos Aires, Argentina.

#### C.O. Dorso\*

Departamento de Física, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires,
Pabellón I, Ciudad Universitaria, 1428 Buenos Aires, Argentina. and
Instituto de Física de Buenos Aires, Pabellón I,
Ciudad Universitaria, 1428 Buenos Aires, Argentina.
(Dated: October 19, 2018)

Testing

PACS numbers: 45.70.Vn, 89.65.Lm



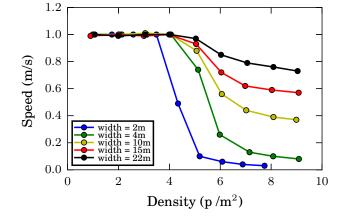


FIG. 1. Flow as a function of the density for different widths. Inittialy, pedestrians were random distributed along the corridor. The measurements were taken in the middle of the corridor once the system reached the stationary state. The lenght of the corridor was 28 m in all cases with periodic boundary conditions in the x direction.

FIG. 2. Speed as a function of the density for different widths. Inittialy, pedestrians were random distributed along the corridor. The measurements were taken in the middle of the corridor once the system reached the stationary state. The length of the corridor was  $28~\mathrm{m}$  in all cases with periodic boundary conditions in the x direction.

<sup>\*</sup> codorso@df.uba.ar

### I. INTRODUCTION

### II. BACKGROUND

#### III. NUMERICAL SIMULATIONS

### IV. RESULTS

### V. CONCLUSIONS

### ACKNOWLEDGMENTS

This work was supported by the National Scientific and Technical Research Council (spanish: Consejo Nacional

de Investigaciones Científicas y Técnicas - CONICET, Argentina) grant number PIP 2015-2017 GI, founding D4247(12-22-2016). C.O. Dorso is full researcher of the CONICET. G.A. Frank is assistant researcher of the CONICET. I.M. Sticco and F.E. Cornes have degree in Physics.

## Appendix A: