Pedestrian collision avoidance on narrow sidewalk: a meeting between psychology and virtual reality
Cléo Deroo, Angélique Montuwy, Béatrice Degraeve, Jean-Michel Auberlet, Anne-Hélène Olivier, Marie-Axelle Granié

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**First Experiment – Questionnaire**
- 64 videos of pre-jousting, before any modification of trajectory
  - 32 counterbalanced videos
- Participants told who was to step down: pedestrian at left or at right in the jousting
- Participants said why the virtual pedestrian stepped down (speed, sex, distraction) with Likert scales
  - 64 videos of complete jousting with the new model.
  - 32 counterbalanced videos
  - One of 8 videos is a fake video (opposite of the model result)
- Participants said if the jousting is credible
  - 64 videos according to the subjects’ answers
  - Overall ranking of the model-based videos and fake videos according to the subjects’ answers

**Social Perception Model**
- Speed and attention influence the decision to step down
- General speed and attention increase the detection time in the ORCA model.

**Collision avoidance behaviors simulation (Orca model)**
- ORCA Model used.
- Different types of collision avoidance (anticipatory, reactive).
- Collision avoidance behaviors are a function of the walking speed, the detection time.

**Discussion**
- To use Social Pedestrian Non Player Characters in VR environment is feasible.
- Needs to take into account the empowerment/authority.

**Problem:** why do we choose to step down or stay on the narrow sidewalk when we encounter a pedestrian walking in the opposite way?