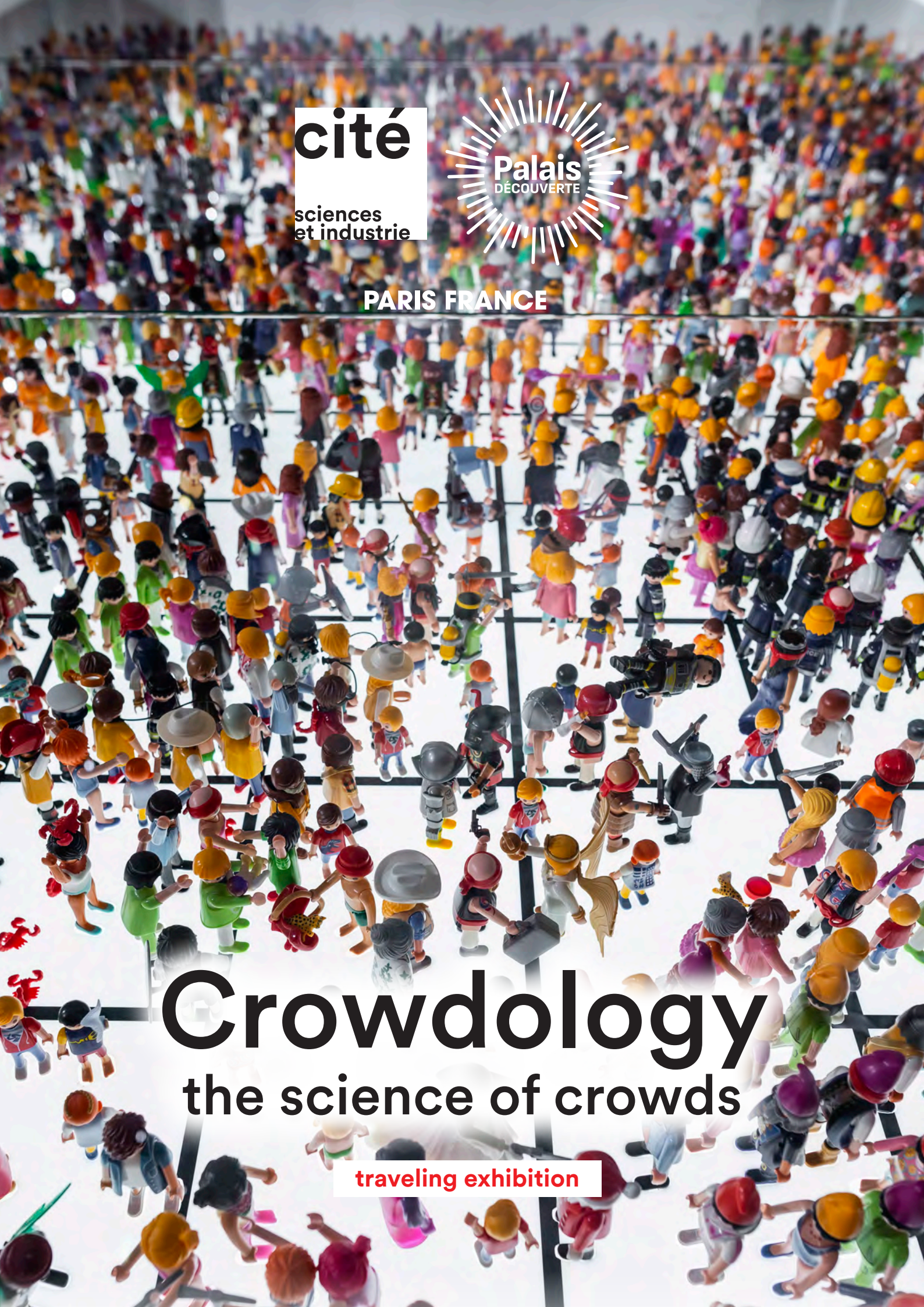
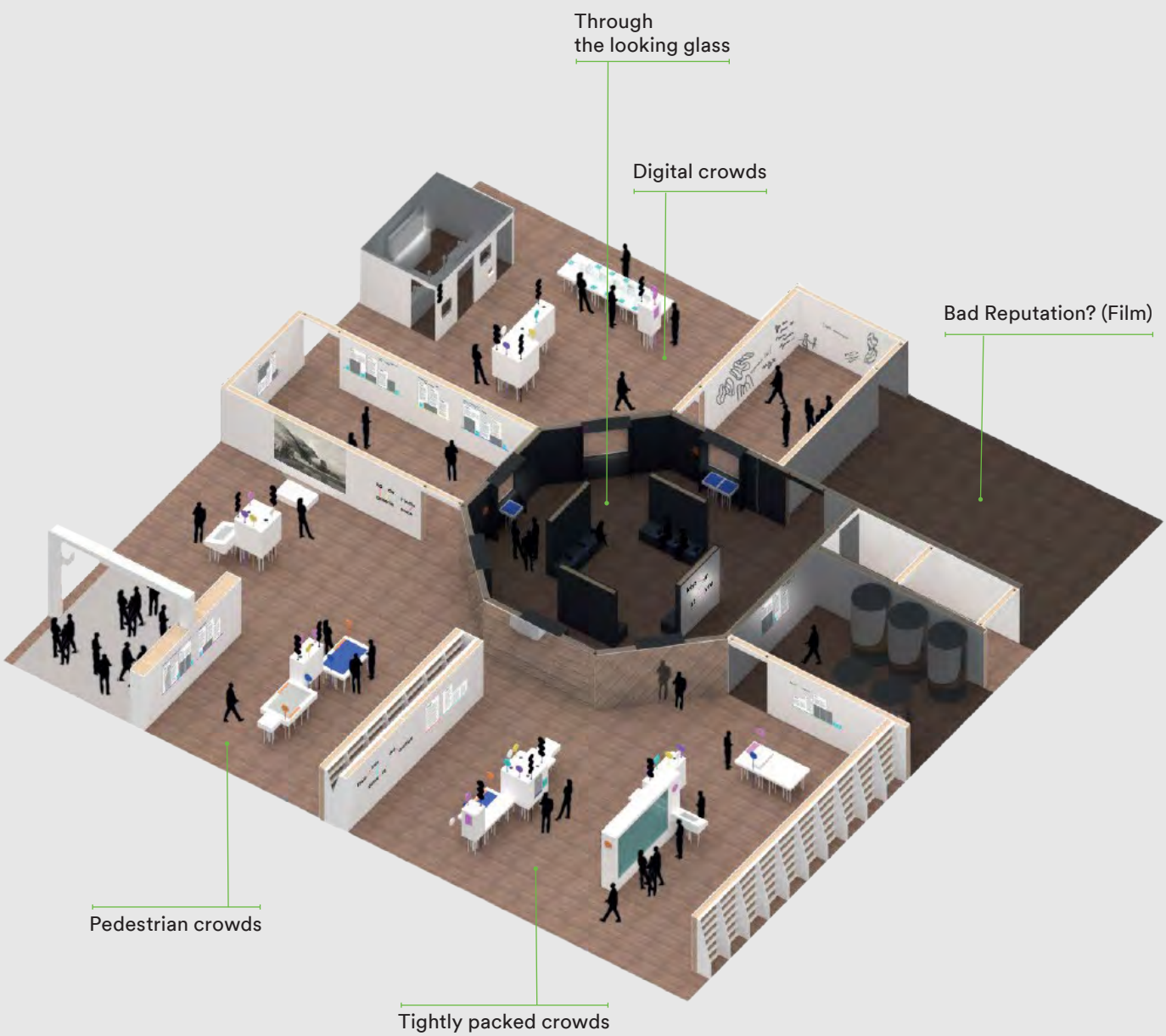


Crowdology

the science of crowds

traveling exhibition


Through
the looking glass
Digital crowds
Bad Reputation? (Film)
Pedestrian crowds
Tightly packed crowds

Tightly packed crowds

When we find ourselves in a tightly packed crowd, we often lose our ability to move freely and become swept up in the collective movements around us. Spontaneous patterns of motion emerge, pushing and pulling us along with little control of our own. By using mathematical and physical sciences, we can gain a deeper understanding of these behaviors and even predict them with remarkable precision. This knowledge can apply not only to human crowds, but also to collections of non-living objects like beads or other grains. By simulating and analyzing these complex dynamics, we can develop strategies to minimize the risks of crowded environments, improving safety for all.

HIGHLIGHTS

- Experience **crowd density**: the artist Iommy Sanchez has created five 1 sq. m booths that simulate increasing crowd density by placing life-size statues inside them: starting with one and progressing to nine statues. Feel the pressure of crowds!
- Explore **Proxemics**: watch a film projected onto the floor and take your place on the dance floor to understand how we adjust our distance to others in different situations based on privacy, location, and context.
- Test **Musical synchronization**: try out the karaoke machine and find out if the feeling of singing in unison with a crowd is real or an illusion.
- Understand crowd biases: watch the film **Bad Reputation?** and learn about the origin of negative biases about crowds and how they are more unified than we think.
- **Through the looking glass**: in a secret room, hidden behind one-way mirrors, visitors become crowd researchers, analyzing and observing behavior in crowd situations, to understand how people behave in groups.

Pedestrian crowds

Trying to make our way along a busy street, avoiding oncoming pedestrians, navigating between crowded underground train stations or squeezing into an already packed lift are all commonplace situations. Spontaneously, without any explicit communication or leadership, we naturally adjust our movements relative to others, seamlessly choosing our paths. Unconsciously, we follow precise rules of movement that depend on the situation, our culture, and our social relationships, revealing the social nature of our species. Scientists study this pedestrian behavior, similar to how they study the movement of starlings, ants, termites, or schools of fish. By understanding these behaviors, we can better plan public transit areas and create realistic crowd simulations for the film and gaming industries.

Digital crowds

Our collective behavior extends to our communication: whether in person, online, or even while singing in a choir. Through social media, connected crowds – or “digital crowds” – come together, sharing reviews and generating enthusiasm. While the collective behavior they exhibit is not new (take rumors for example), their ability to gather quickly and on a massive scale is unprecedented. Researchers are studying the architecture of these networks and how they may expose us to the unknown or reinforce our biases. This research raises two key questions: how can we assist users in navigating digital crowds, and how can digital platforms hosting them be better regulated?

Unlocking the complexity of Crowds: a scientific exploration

The crowd is a subject that speaks to everyone: everyone has experienced it, at least once in their life, a striking experience, whether happy or otherwise. Because the crowd is not only a sum of individuals: their interactions give rise to a little something more, which this exhibition looks to decipher. To this end, it calls on a variety of disciplines: fluid mechanics, granular physics, mathematics, behavioral science and social psychology.

How do we study the tightly packed crowds of large gatherings? What hidden rules do we unconsciously follow when we move among others? How is public opinion shaped on social media?

Crowds do not have to be negative or scary, quite the contrary! Crowds can be an ally and a powerful tool. Therefore, they can be associated with positive memories. We all have in mind a great festive event related to crowds, like the Carnival in Rio de Janeiro, the New York Marathon or Diwali celebrations.

Thus, the message carried by this exhibition is not only a message of prevention and scientific popularization, but is also a joyful message, by showing a crowd in which we can trust and learn from.

Crowdology is an exhibition which is part of the editorial theme of "Sociétéscience / The mutations of our world". This editorial line includes exhibitions that deal with developments in science and technology and their impact on our lives both as individuals and collectively.

Mehdi Moussaïd is the scientific curator of the “Crowdology” exhibition.

As a researcher in cognitive science at the Max Planck Institute in Berlin, he is the author of the book *Fouloscopie* (the science of crowds) and runs the eponymous YouTube channel. With a PhD in ethology and a background in IT engineering, he previously worked in a physics laboratory. This diverse career background allows him to consider various perspectives when researching crowds

GOOD TO KNOW

Audience: all audiences from 10 years old
Surface Area: 600 sq. m
Composition: museographic elements including hybrid elements, sets, multimedia, audiovisuals, objects, graphic murals.
Languages: French, English, Spanish
can be adapted in other languages
Accessibility: Universal accessibility

In partnership with MAX PLANCK INSTITUTE FOR HUMAN DEVELOPMENT

contacts
Universcience
Export Department
30, avenue Corentin-Cariou
75019 Paris (France)

Mail : contactpro@universcience.fr
Tel : + 33 (0) 1 40 05 73 53

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