This lecture aims at providing an answer that can be given to the following five key questions:

- Why a crowd is a “social, hence complex,” system?
- How mathematical sciences can contribute to understand the “behavioral dynamics of crowds”?
- How the crowd behaves in extreme situations such as panic and how models can depict them?
- Can a crowd be subject to large deviations (black swan)?
- Which are the methods and tools to deal with the multiscale features of a crowd?

The answer to the key question takes advantage of recent research activity documented in the five titles in the bibliography. The answer opens to challenging research perspectives.