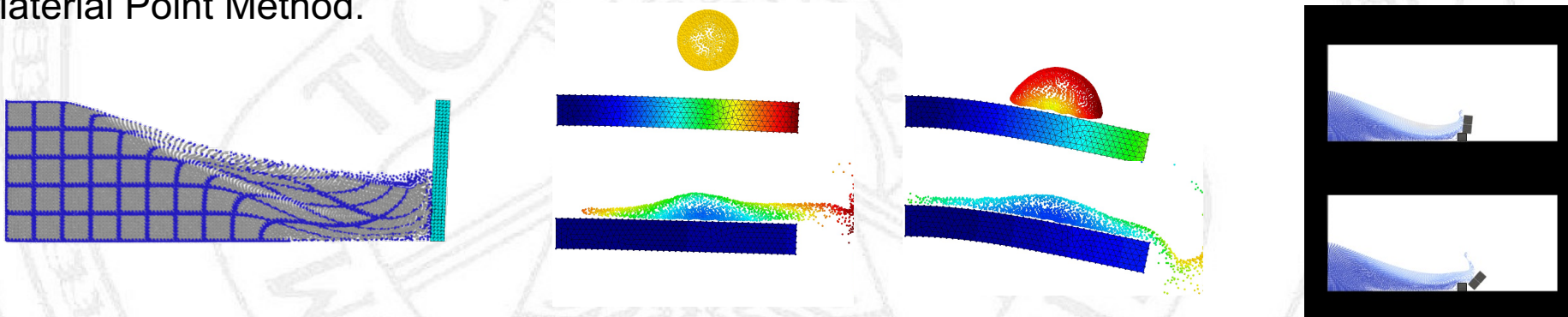




## **Simulation of extreme water hazards and their interaction with structures and protection systems**

There is increasing concern on the risk related to the devastating action of water, especially in this climate change scenario. Even if, in most cases, little could be done to minimize the effect of such disasters, the design of new structures and protecting systems should be improved to minimize the damage induced by the natural hazards. A first step towards this goal is the possibility to assess, in a fast and accurate way, the interaction between the fluid/rock or debris flow and the surrounding terrain and structures.

The seminar will give an overview of the past and future research lines on the simulation of the effects of water natural disasters on structures and landscape. This is done developing and coupling different numerical methods and discretization techniques ranging from classical finite elements to Lagrangian particle methods such as the Particle Finite Element Method and the Material Point Method.



**Prof. Antonia Larese**  
*Università degli Studi di Padova*

**30 maggio 2022, ore 12:00 (precise)**  
**Aula MS1, DICAr**