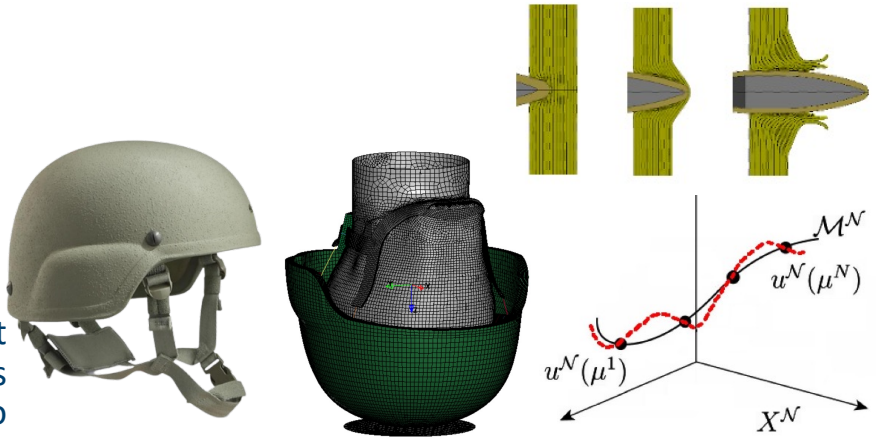
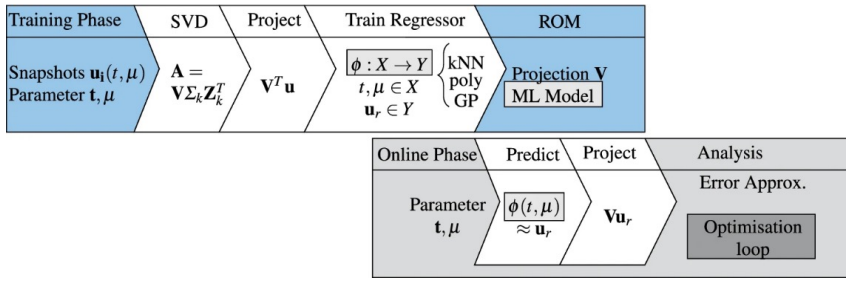
Structural integrity under extreme loads

Topic: Reduced order models

TITLE: Reduced order models applied to impacts engineering

RESEARCH BACKGROUND:
Impact analyses are highly nonlinear and should be solved using explicit algorithms which are time consuming. In recent years reduced order models (ROMs) techniques are gaining momentum for multi queries simulations to alleviate the computational burden of such numerical problems. The aim of this thesis is to define a ROM workflow that is able to replicate the nonlinear dynamics of impact on helmets as full order model (FOM).





METHODOLOGY: Numerical

DURATION: 9 months

CONTACTS:

andrea.manes@polimi.it
marco.giglio@polimi.it