# Recent Advances in Accelerated Simulations for Solid, Fluid and Coupled Problems: Implementations and Applications

Ado Farsi*, Giacomo Capodaglio†

*Imperial College London, UK, ado.farsi@imperial.ac.uk

†Los Alamos National Lab, USA, gcapodaglio@lanl.gov

This series of talks will discuss recent developments for accelerated high-performance simulations in solid mechanics, fluid dynamics, and coupled problems. We aim at bringing together researchers and practitioners from academia and industry to discuss optimal code design and implementations with a special focus on multi-core graphics processing unit (GPU) and central processing unit (CPU) accelerated simulations. Applications of artificial intelligence (AI) and reduced order models (ROMs) to enhance computational efficiency are also welcomed. Examples of applications to be discussed include (but are not limited to): rock mechanics and civil engineering, climate modelling, subsurface and energy engineering.