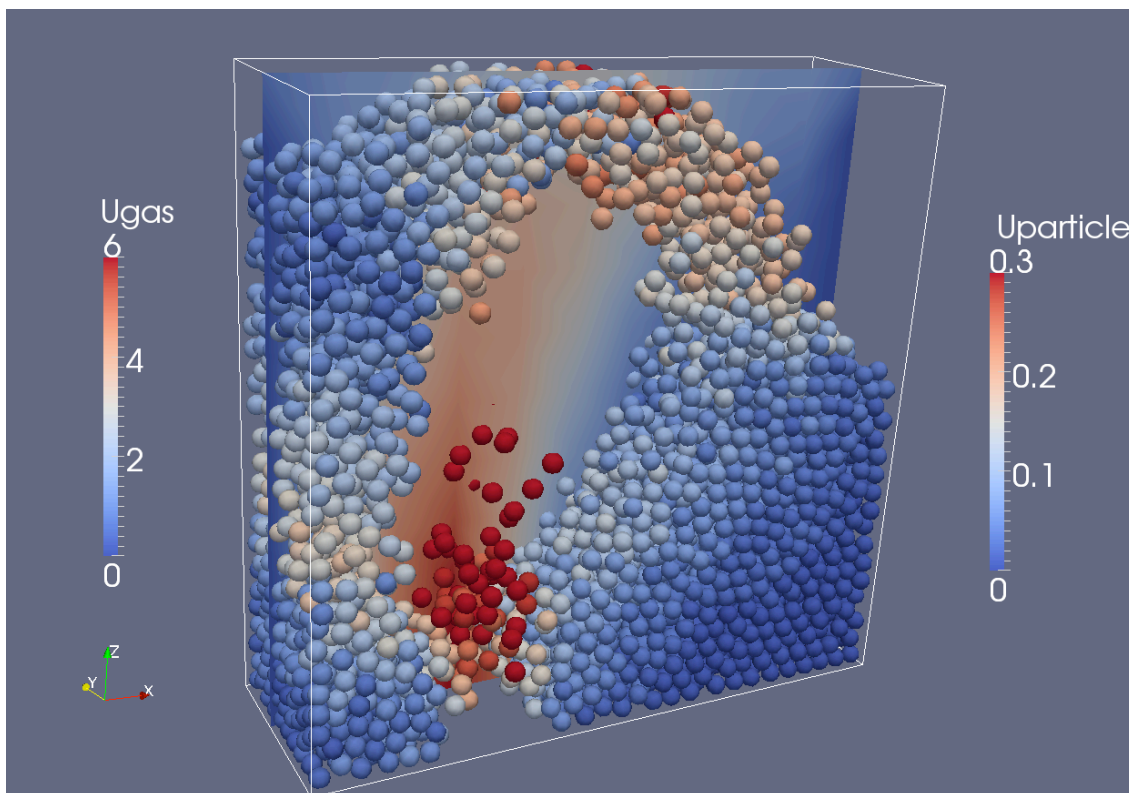


Harnessing Open Source Simulation Software

Open Source DEM with LIGGGHTS

Christoph Kloss

Christian-Doppler Laboratory on Particulate Flow Modelling JKU Linz



We present the development of an open-source software for modeling granular material by means of the Discrete Element Method. LIGGGHTS stands for 'LAMMPS Improved for General Granular and Granular Heat Transfer Simulations' and is based on LAMMPS ('Large Atomic and Molecular Massively Parallel Simulator'), a successful open source Molecular Dynamics code by Sandia National Laboratories for massively parallel computing on distributed memory machines. We give a brief overview of implemented models and features. Finally, we would like to focus on the simulation of coupled granular-fluid systems with the CFD-DEM approach.