

ON THE NUMERICAL CALIBRATION OF DISCRETE ELEMENT MODELS FOR THE SIMULATION OF BULK SOLIDS

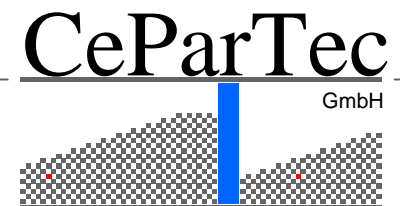
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Selected relations of micro-properties and macro-properties

Macro-Level

bulk damping

bulk friction

compressibility

...

...

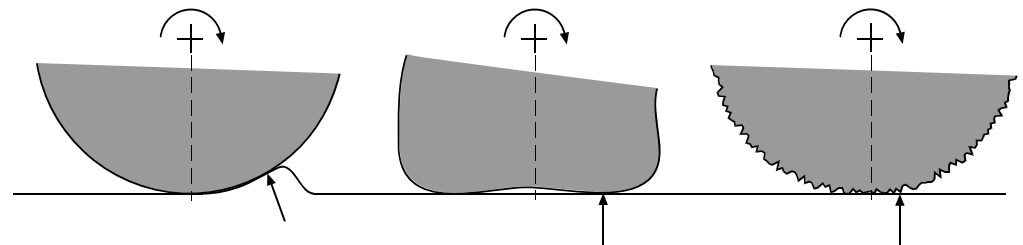
Micro-Level

contact damping

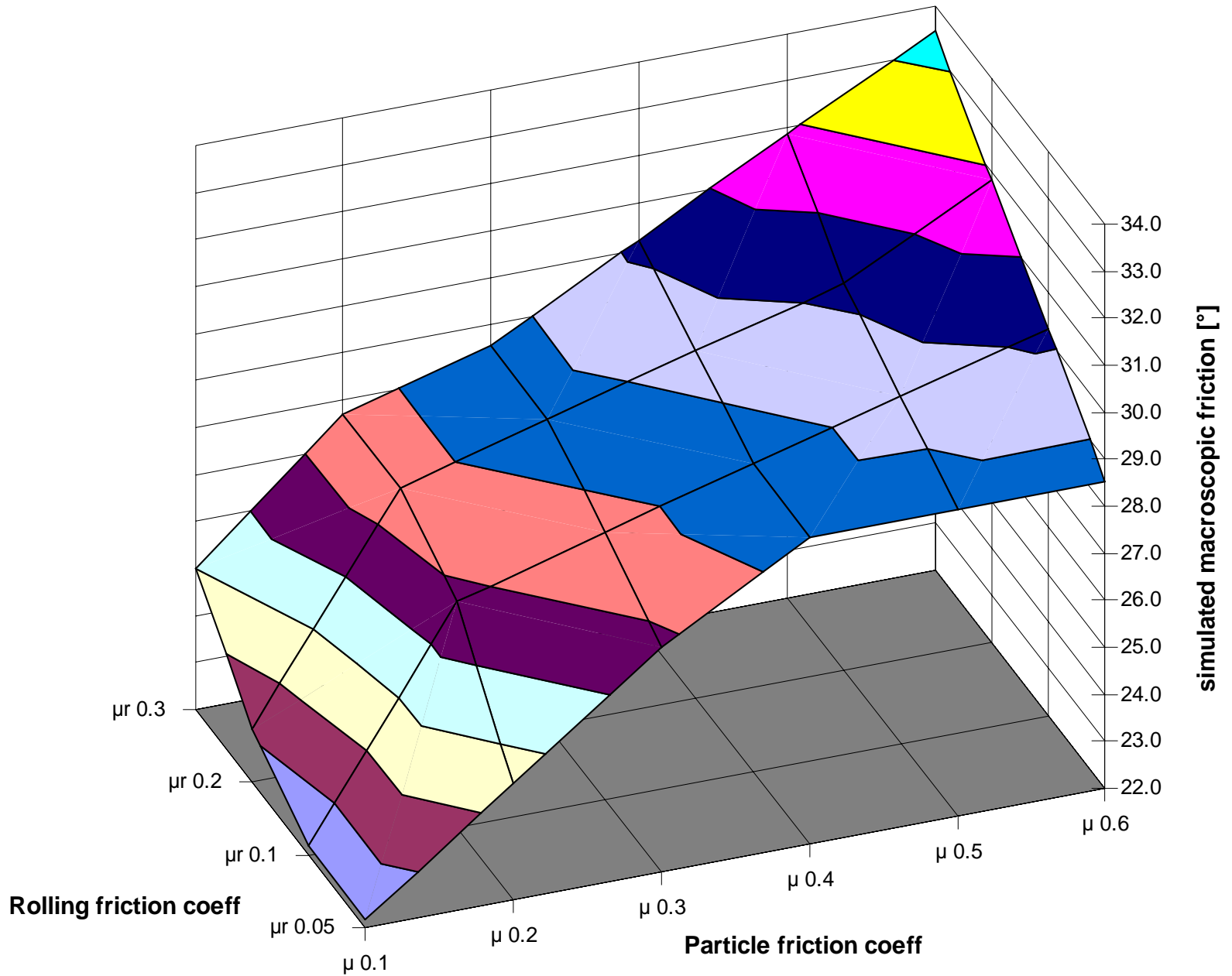
sliding friction

rolling friction

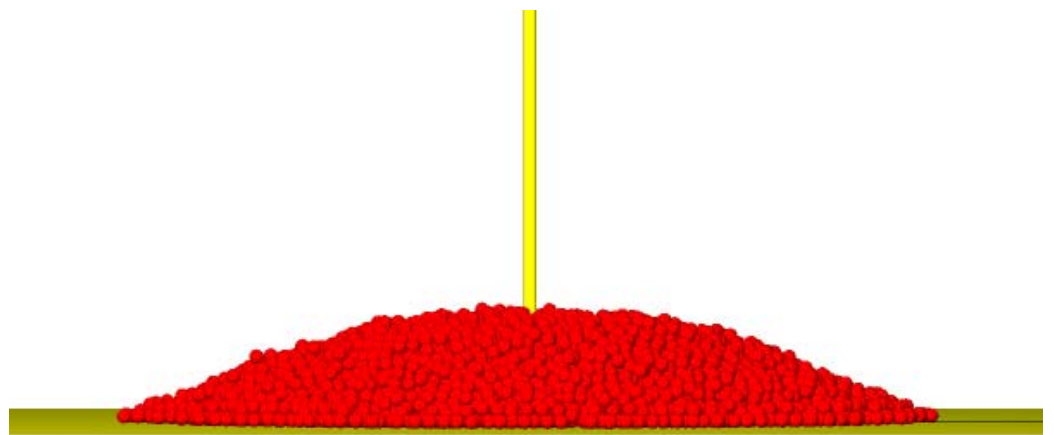
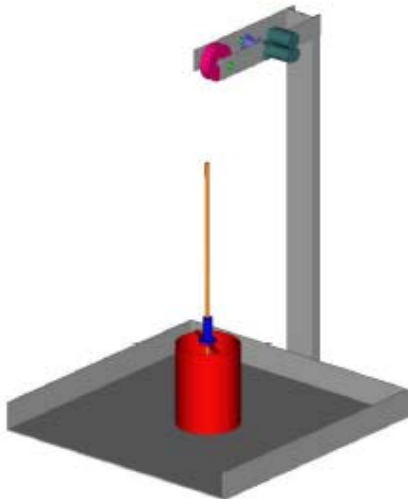
particle shape



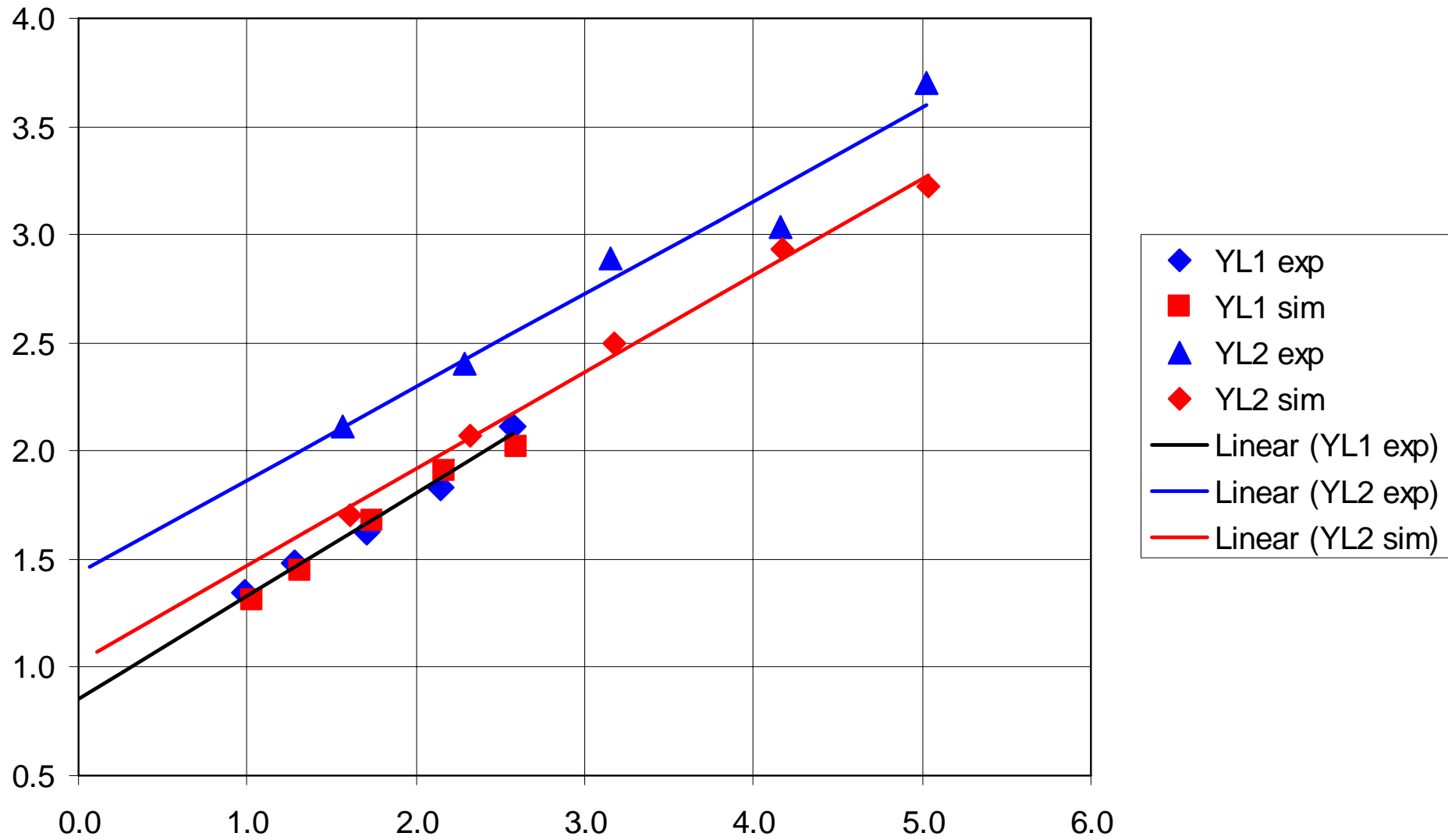
Macroscopic friction of a sphere assembly



Calibration of friction

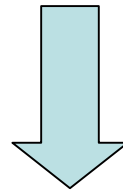


Yield loci of a cohesive sphere assembly



Group of experimental researchers and numerical researchers working on Calibration of Granular Material

- identification of the influences of the micro-properties on macro-properties
- development of simple experiments that can easily be simulated



Standard Calibration Technique for DEM-Models