



Jülich Soft Matter Days

11 - 14 November 2014

Seminaris Hotel in Bad Honnef, Germany

Book of Abstracts



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Periodic and quasi – periodic motions of many particles falling under gravity in a viscous fluid

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We investigate dynamics of many particles settling under gravity in a viscous fluid within the Stokes flow regime. We consider two families with a very wide range of regular initial configurations of many point-particles which lead to periodic and quasi-periodic motion. We vary the relative distance between the particles and observe how does it affect the dynamics. We observe the oscillations under some out-of-phase rearrangements of the particles and obtain several types of periodic motions for specified range of initial conditions. We also see a large influence of initial conditions on the cluster lifetime.

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