164th MSS-Seminar
Wednesday, April 26, 15:30 hrs,
Room 00.156,
Cauerstraße 3, Erlangen.

Intermittent flow of soft particles passing through orifices

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Soft, low-friction particles in silos show peculiar features during the discharges from silos. The outflow rate is found to become increasingly fluctuating and even intermittent with decreasing orifice size and with decreasing filling height. In orifices narrower than two particle diameter, the outflow can be stopped completely but can be dissolved spontaneously. We suppose this phenomenon is caused by viscoelasticity of soft particles. Besides, we investigate the force on a spherical obstacle in discharges of cylinder silos. The force grows quadratically with the sphere diameter in the case of soft particles.