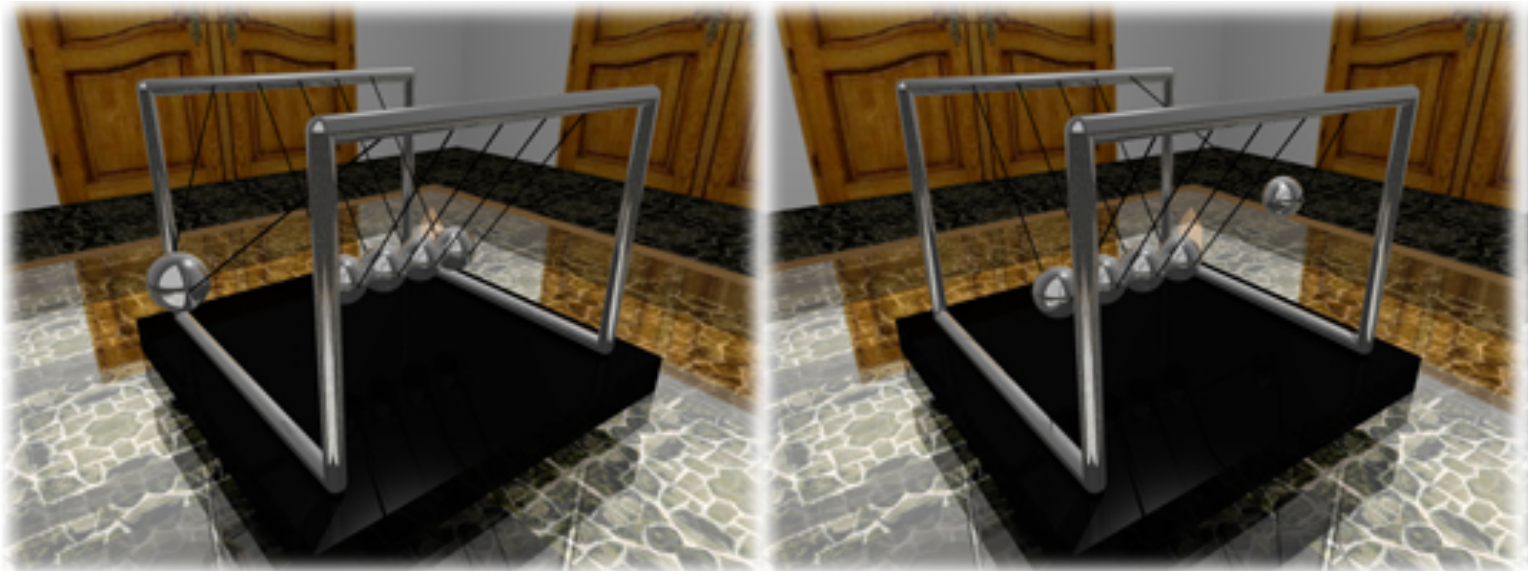


Regularizing a Time-stepping Method for Rigid Multibody Dynamics

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Rigid multibody dynamics with friction and impact are ill-posed. The rigidity assumption can be responsible for large null-spaces. By describing the multibody system with springs switching on and off in a variational inequality setting, the solutions are smooth and the behaviour in the stiff limit can be analyzed. From the limiting process it becomes apparent that the regularized solution converges to a unique weighted minimum norm solution of the unregularized problem.

