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Leges Motus*



Friedrich-Alexander-Universität
Erlangen-Nürnberg



Seminar über Fragen der Mechanik

zu folgendem Vortrag wird herzlich eingeladen

Mittwoch, **09.05.2012, 16:30 Uhr**, Konrad-Zuse-Str. 5, Raum 02.030

Geometric Generalisations of the Shake and Rattle methods

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Constrained mechanical systems (robots, rod models) have to be simulated with care. In particular, it is important to design numerical integrators which preserve the “mechanical structure” of the system. Those integrators are known, for instance, to approximately preserve energy and other invariants. I will give a geometric description of the existing structure preserving integrators for constrained mechanical systems (called “Shake” and “Rattle”). Finally I will explain how to extend those methods to handle cases that were out of reach for the current solvers. (Joint work with K. Modin and R.I. McLachlan)

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