Institut für Hydromechanik (IfH)
Prof. Dr.-Ing. Markus Uhlmann

Institut für Mechanik (IFM)
Prof. Dr.-Ing. Peter Betsch
Prof. Dr.-Ing. Thomas Seelig

Institut für Strömungsmechanik (ISTM)
Prof. Dr.-Ing. Bettina Frohnapfel

Institut für Technische Mechanik (ITM)
Prof. Dr.-Ing. Thomas Böhlke
Prof. Dr.-Ing. Alexander Fidlin
Prof. Dr.-Ing. Carsten Proppe
Prof. Dr.-Ing. Wolfgang Seemann

Kolloquium für Mechanik

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Referent: **Dr. Dominik Kern**
                 Professur Technische Mechanik, Technische Universität Chemnitz

Datum: Freitag, 19. Oktober 2018, 12:00 Uhr
Ort: Neuer Hörsaal, Gebäude 30.46 (Chemie)

Titel: **Variational Integrators for Mechanical Systems**

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Abstract

Variational integrators are numerical integrators for Hamiltonian systems derived from the Euler-Lagrange equations of a discretized Hamilton's principle. Variational integrators are momentum-preserving and symplectic, as consequence they are more robust and have a better long-term behavior than generic methods for ordinary differential equations.
This presentation shows how to derive variational integrators for multi-body systems from scratch and outlines the extensions to thermo-mechanical systems and to space-continuous systems.

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Alle Interessenten sind herzlich eingeladen.
Prof. Dr.-Ing. Wolfgang Seemann