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**Leine, Remco I.** (CH-ETHZ-MPM); **van de Wouw, Nathan** (NL-EIND-MDY)

★ **Stability and convergence of mechanical systems with unilateral constraints.**

Lecture Notes in Applied and Computational Mechanics, 36.

*Springer-Verlag, Berlin, 2008. xiv+236 pp. \$129.00. ISBN 978-3-540-76974-3*

This monograph presents a qualitative analysis of non-smooth mechanical systems. More precisely, the authors establish a Lyapunov stability theory for measure differential inclusions. The first half of the monograph contains the theoretical background needed on non-smooth mechanical systems. The stability theory itself is then limited to measure differential inclusions. As an application, stability, instability and attractivity results are discussed for Lagrangian mechanical systems with frictional unilateral constraints. Illustrative examples highlight the use and the limits of the theory. The last part of the monograph is dedicated to convergence properties of measure differential inclusions which satisfy some monotonicity properties.

The monograph is easy to read and the single steps are well motivated and illustrated. Further historical notes, based on original texts, illuminate the beginning of stability theory.

Reviewed by *Florian Schmid*

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