## RATE-DEPENDENT PRANDTL-ISHLINSKII MODEL OF HYSTERESIS AND ITS APPLICATION IN ENGINEERING

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Hysteresis phenomena can be observed in many fields of science, e. g., in electromagnetism, phase transitions, and elastoplasticity. It is characterized by a nonlinear irreversible input-output relation involving memory effects. Among the hysteresis models that have been applied in engineering problems, the Prandtl-Ishlinskii operator is analytically simple and particularly advantageous as an explicit representation of the inverse is available, even in the rate-dependent case. In this talk we discuss some basics of the Prandtl-Ishlinskii model and outline its application in hysteresis compensation for engineering problems.

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