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Modelling and Control in Contact Mechanics

**Variational-Hemivariational Inequalities of Evolution Type
and their Applications to Contact Mechanics**

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Abstract: In this talk we consider evolution variational-hemivariational inequalities of second order. We establish results on existence and uniqueness of solutions by using the theory of multivalued pseudomonotone operators. The main feature of the inequalities under consideration is the fact that they involve nonsmooth nondifferentiable functionals of which at least one is convex. Finally, the results are applied to a variational-hemivariational inequality arising in the study of dynamic contact of a viscoelastic body and a foundation.