Penalty method for variational-hemivariational inequalities with application

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The motivation of the talk is a new mathematical model which describes the equilibrium of a locking material ([3]) in contact with a foundation. The contact is modelled with friction and a nonsmooth multivalued interface law. The law involves unilateral constraints and subdifferential conditions. We describe the contact model and present its classical formulation. Then, we derive the weak formulation of the problem in the form of a time-dependent variational-hemivariatinal inequality ([2, 1]) and prove its weak unique solvability. Finally, we provide convergence result for a penalized form of the problem.

References

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