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## **Penalization method for a class of variational-hemivariational inequalities with history operator**

We consider a class of variational-hemivariational inequalities with history operator and we prove an existence and uniqueness of a solution for such inequalities. Next, we use the penalized method in the study of variational-hemivariational inequalities with history operator. We prove the unique solvability of the penalized problems and the convergence of their solutions to the solution of the original problem, as the penalization parameter converges to zero. Finally, we apply our abstract results in the analysis of frictional contact problem.

### **References**

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- [2] M. Sofonea, A. Matei, *Mathematical Models in Contact Mechanics*, London Mathematical Society Lecture Note Series 398, 2012.
- [3] M. Sofonea, F. Patrulescu, *Penalization of history dependent variational inequalities*, *European Journal of Applied Mathematics* 25 (2014), 155–176.