Modelling and Control in Contact Mechanics

# An Algorithm for the Computation of the Generalized Solution in Implicit Systems

## Mihaela Roxana Nicolai

Institute of Mathematics of the Romanian Academy, Bucharest, Romania

roxana.nicolai@gmail.com

**Abstract:** The introduction of the generalized solution allows the solution of implicit systems in the critical case as well, i.e. when the classical assumptions of the implicit functions theorem are not satisfied. The generalized solution is compact, but it may not be a manifold. In certain examples, it may have a complex structure and its approximation is nontrivial. We discuss here an algorithm for the approximation of the generalized solution. Numerical tests are also included. Besides its intrinsic interest, the applications concern shape optimization problems, fixed domain methods.

**References:**

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