

EMP

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1 Introduction

EMP (Extended Mathematical Programming) is not a solver but an (experimental) framework for automated mathematic programming reformulations. The idea behind EMP is that new upcoming types of models which currently cannot be solved reliably are reformulated into models of established math programming classes in order to use mature solver technology. So far EMP supports

- Bilevel Programs
- Disjunctive Programs
- Extended Nonlinear Programs
- Embedded Complementarity Systems
- Variational Inequalities

The reformulation is done by the solver JAMS which currently is the only solver that is capable to handle EMP models. Examples showing how to use the EMP framework and the solver JAMS are made available through the GAMS EMP Library which is included in the GAMS Distribution. EMP has been developed jointly by Michael Ferris of UW-Madison, Ignacio Grossmann of Carnegie Mellon University and GAMS Development Corporation.

EMP and JAMS come free of charge with any licensed GAMS system but need a subsolver to solve the generated models.