Sven Leyffer
Advances in Mixed-Integer Nonlinear Optimization

Mathematics and Computer Science Division
Argonne National Laboratory
9700 South Cass Ave
Argonne
IL 60439
leyffer@mcs.anl.gov

Many real-world optimization problems involve discrete decisions in addition to nonlinearities, giving rise to mixed-integer nonlinear optimization problems.

We present recent advances in mixed-integer nonlinear optimization methods that are based on inexact subproblem solves during the branch-and-bound tree-search. Numerical results on a broad range of large-scale mixed-integer nonlinear optimization problems will be presented.