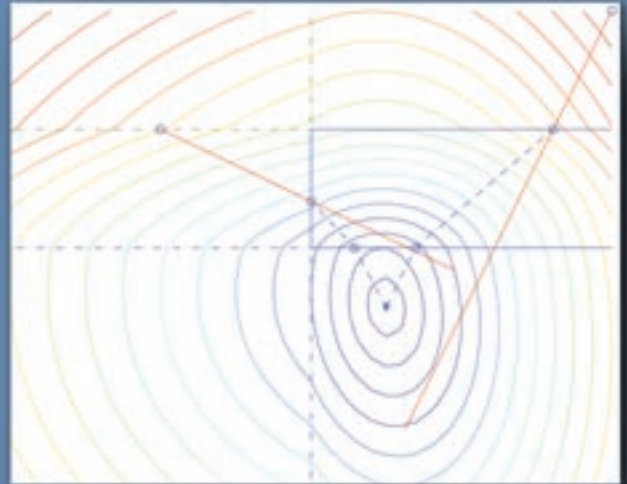


GAMS/PATHNLP

GAMS

PATHNLP solves NLPs using a reformulation via the KKT (first-order) conditions. PATH, the underlying solver engine, is a robust Newton method; it implements a nonmonotone stabilization scheme and a sophisticated crash technique to quickly move to a solution.



Performance (gambling model)

Problem Size	7	8	9	10	11	12	13	14
#Variables	509	1261	3186	4151	8885	16671	21856	27328
CONOPT	18	152	time					
MINOS	2	9	66	93	309	5506		
SNOPT	37	980	2052					
PATHNLP	1	4	34	77	579	558	1089	1689

PATHNLP enables the solution of previously unsolvable problem types, such as:

- Data Reconciliation problems
- Maximum entropy problems
- very large QPs and NLPs

Minimum energy membrane position computed by PATHNLP. The model solved is part of GAMS LIB, and was taken originally from the COPS test set.

