

# OPTIMIZATION

www.gams.com

# GAMS

## High-Level Modeling

The General Algebraic Modeling System (GAMS) is a high-level modeling system for mathematical programming problems. GAMS is tailored for complex, large-scale modeling applications, and allows you to build large maintainable models that can be adapted quickly to new situations. Models are fully portable from one computer platform to another.

## Wide Range of Model Types

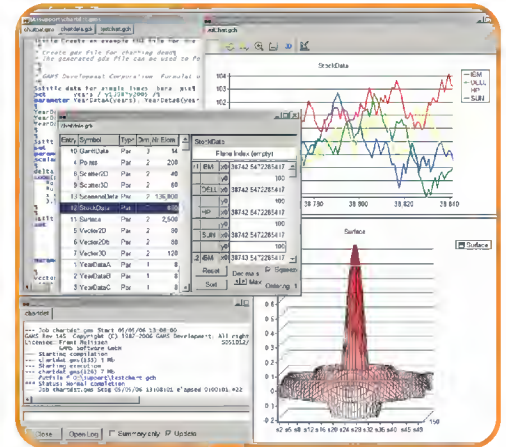
GAMS allows the formulation of models in many different problem classes, including

- Linear (LP) and Mixed Integer Linear (MIP)
- Quadratic Programming (QCP) and Mixed Integer QCP (MIQCP)
- Nonlinear (NLP) and Mixed Integer NLP (MINLP)
- Constrained Nonlinear Systems (CNS)
- Mixed Complementary (MCP)
- Programs with Equilibrium Constraints (MPEC)
- Conic Programming Problems
- Stochastic Linear Problems

## GAMS/SCENRED-2

GAMS/SCENRED-2 is a major update of GAMS/SCENRED, the well-known software tool for scenario reduction in stochastic programming models:

- full scenario reduction functionality for two-stage models
- various construction methods for generating scenario trees for multi-stage models
- visualization of scenario trees and scenario processes



GAMS Integrated Developer Environment for editing, debugging, solving models, and viewing data.

## State-of-the-Art Solvers

GAMS incorporates all major commercial and academic state-of-the-art solution technologies for a broad range of problem types, including global nonlinear optimization solvers.

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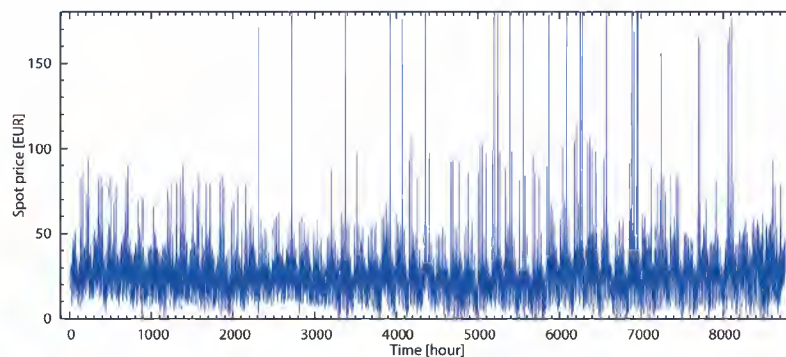
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SCENRED-2 software was developed at the Department of Mathematics at Humboldt-University Berlin, Germany, by Holger Heitsch

## From a Stochastic Price Scenario Process to a Reduced Scenario Tree



PriceGAMS - TreeGAMS