Modern Regression Analysis

Robert Cohen, SAS Institute, Cary, NC

Abstract
Nonparametric and robust modeling are widely employed in modern regression analysis. Nonparametric analysis is used to model data for which knowledge of the underlying model is limited. Robust parametric or nonparametric methods are appropriate when data contains outliers. This workshop is intended for a broad audience of statisticians and data analysts who are interested in modern regression methods.

The first part of this workshop describe these methods and SAS tools for fitting

- robust local regression models with the LOESS procedure
- thin plate smoothing spline models with the TSPLINE procedure
- generalized additive models with the GAM procedure
- robust parametric models with the new ROBUSTREG procedure

The second part of the workshop illustrates the use of these tools with several examples. Topics include controlling the amount of smoothing in nonparametric methods and choosing appropriate robust methods to handle outliers.

NO PAPER WAS AVAILABLE AT TIME OF PUBLICATION