Methods of estimation and inference for nonlinear, simultaneous equations models were discussed at an applied level. These are multivariate models which cannot be written with the dependent variables equal to a vector-valued function of the explanatory variables plus an additive error either because it is impossible or unnatural to do so; in short, the model is expressed in an implicit form \( e = q(y, x, \theta) \) where \( e \) and \( y \) are vector valued.

There are two basic sets of statistical methods customarily employed with these models, those based on a method of moments approach with instrumental variables used to form the moment equations and those based on a maximum likelihood approach with some specific distribution specified for \( e \). The talk was restricted to a discussion of the method of moments approach, called two- or three-stage least squares in cross-sectional settings and generalized method of moments in dynamic settings, because it is by far the more frequently used of the two.

The material for the talk was taken directly from Sections 6.1, 6.2, and 6.3 of A. Ronald Gallant, *Nonlinear Statistical Models*, New York: John Wiley and Sons, 1987. These sections are readable at an applied level. A working knowledge of Sections 1.1, 1.2, 1.3, and 1.4 of the same reference is presumed; these sections are also readable at an applied level. The reader who was not present at the talk, or who was and wishes to review some of the details, is referred to the above listed sections of *Nonlinear Statistical Models*.

The talk went as follows. The basic notation was introduced and the point that it is possible to analyze only a subset of the equations from the system was stressed. An electricity pricing example was used as a cross-sectional example. The example was taken from Sections 5.1 and 6.1 of *Nonlinear Statistical Models* where the data is given as well. The notion of instrumental variables was introduced, the moment equations defining the estimator were set forth, and the estimator was derived by analogy with univariate nonlinear least squares methods. SAS code illustrating the computations was displayed; this code is given as Figure 1, Section 6.2, of the reference. An asset pricing example was used as an example of a dynamic system. The example was taken from Sections 6.1 of *Nonlinear Statistical Models* where the data is given. The point that the only difference between the cross-sectional and dynamic situation is the variance matrix of the moment equations was stressed. Methods of estimating the variance matrix were presented. SAS code illustrating the computations was displayed; this code is given as Figure 2, Section 6.3, of the reference.