Boolean-valued models revisited

Boolean-valued models generalize the notion of models in sets, allowing formulae to take truth-values in a Boolean algebra. Such models allow, for example, an alternative (but equivalent) approach to forcing in set-theory.

In this talk we will take a fresh look at Boolean valued models, focusing in particular on three aspects - simple closure properties, term models, and the relationship between elementary equivalence and isomorphisms of models.

A rough outline of the talk might be as follows:

- Competing definitions of Boolean valued models
- The prime ideal theorem and its generalizations (Rasiowa-Sikorski, Martin)
- Application 1: Łoś' theorem
- Universal (term) models
- Application 2: Completeness à la Rasiowa-Sikorski
- Topological spaces of models
- Elementary equivalence and isomorphisms of models

Abstract for Cambridge CAMELEON talk, December 2, 2006. Carsten Butz, IT University of Copenhagen, Denmark.