

UNILOG 2013

Session title: “Between First- and Second-order Logic”

Organizers: Otávio Bueno (University of Miami) and Gila Sher (University of California, San Diego)

Description:

Second-order logic raises a number of philosophical issues, particularly when it is contrasted with its first-order counterpart. Is second-order logic really logic? What are the requirements (if any) for something to be considered logic rather than, say, mathematics? How should we compare the ontological commitments of first-order logic with those of second-order logic? How should the incompleteness, consistency, and the Skolem-Löwenheim Theorem in first- and second-order logics be assessed? What are the implications of the “first-order thesis” and its criticisms? What are the connections between second-order logic and set theory? Do plural quantifiers provide a suitable understanding of second-order logic quantifiers? How should the model theory for second-order logic be developed? How should the historical shift from higher-order logic to first-order logic be understood? How should first- and second-order logics be compared and contrasted? How do all of these issues change when one considers systems that are intermediate between standard first-order logic and full second-order logic, such as, first-order logic with generalized quantifiers, infinitistic first-order logic, first-order logic with branching quantifiers, or monadic second-order logic? These and related issues will be examined in this session with the goal of assessing current debates as well as moving them forward.

Date: April 4, 2013

8:45-9:30 a.m.

Keynote Talk

Arnold Koslow (CUNY, Graduate Center, USA)

“Beth’s Intrinsic Definitions and the Uniqueness of the Logical Operators and First- and Second-Order Quantifiers”.

9:30-10:00 a.m.

Otávio Bueno (University of Miami, USA)

“Second-order Logic and Unrestricted Quantification”

10:00-10:30 a.m.

A. Avron and L. Cohen (Tel Aviv University, Israel)

“Ancestral Logic”

10:30-11:00 a.m.

Coffee Break

11:00-11:30 a.m.

Christopher Menzel (Texas A&M University, USA)
“Logic with a Single Type: Motivations and Metatheory”

11:30 a.m.-12:00 p.m.

María Manzano (University of Salamanca, Spain)
“The Concept of Subset in Second-order Logic”

12:00-12:30 p.m.

Alexander Paseau (Oxford University, UK)
“Logical Consequence and the First-/Second-order Logic Distinction”

12:30-2:15 p.m.

Lunch Break

2:15-2:45 p.m.

Tomoya Sato (University of California, San Diego, USA)
“Three Questions About Genuine Logic”

2:45-3:15 p.m.

Catarina Dutilh Novaes (Groningen University, The Netherlands)
“Axiomatizations of Arithmetic and the First-order/Second-order Divide”

3:15-3:45 p.m.

Roy Cook (University of Minnesota, USA)
“Possible Predicates, Actual Properties, and Hale’s Principle”

3:45-4:30 p.m.

Keynote Talk

Ed Zalta (Stanford University, USA)
“Models of Object Theory and the Analysis of Mathematics”

4:30-5:00 p.m.

Coffee Break/End of workshop