

# Logikseminariet Stockholm–Uppsala

Prof. Masahiko Sato  
Kyoto

## Abstraction and Substitution by Frege–Gentzen Approach

Frege and Gentzen used two disjoint sets of variables, namely the sets of free variables and bound variables, as the basic building blocks for constructing syntactic entities like propositions and proofs. For Frege, in particular, free variables are always tied with the notion of inference which enables us to proceed from already asserted judgments to a new judgment.

In this talk, we will follow Frege–Gentzen approach, and will show that substitution can be defined without appealing to the notion of alpha-equivalence, and also show that we can define alpha-equivalence more naturally compared to traditional approach. It is hoped that this approach is useful in practice for implementing proof assistant systems on a computer.

Onsdag 8 mars kl. 10.00–11.45,  
sal 16, hus 5,  
Kräftriket, Stockholm.

<http://www.math.su.se/~jesper/seminarier/>