$\lambda_{\rho\omega}$

Albert ten Napel

1 Syntax

l is chosen from an infinite set of labels.

$$
\begin{array}{rll}
t, T ::= & & \text{(terms)} \\
& x, y, z & \text{(variables)} \\
& 'l & \text{(labels)} \\
& c & \text{(constants)} \\
& t\ t & \text{(application)} \\
& \lambda(x : T).t & \text{(abstraction)} \\
& \Pi(x : T).t & \text{(dependent function type)} \\
& \mathcal{U}_{\mathbb{N}} & \text{(universe)} \\
\\
& \langle\rangle & \text{(empty row)} \\
& \langle t : T \mid t \rangle & \text{(row extension)} \\
& C \Rightarrow T & \text{(constrained type)} \\
& \{\} & \text{(empty record)} \\
\\
c ::= & & \text{(constants)} \\
& Type & \text{(universe of small types)} \\
& Row & \text{(universe of rows)} \\
& Label & \text{(universe of labels)} \\
& Rec & \text{(record constructor)} \\
& Var & \text{(variant constructor)} \\
\\
& extend & \text{(record extension)} \\
& restrict & \text{(record restriction)} \\
& select & \text{(record selection)} \\
& inject & \text{(variant injection)} \\
& embed & \text{(variant embedding)} \\
& elim & \text{(variant elimination)} \\
\\
C ::= & & \text{(constraints)} \\
& T/t & \text{(row lacks label)} \\
& T \sim T & \text{(row equality)}
\end{array}
\tag{1}
$$