TP Programmation

L3

07 December 2010

In this session we will find the set of **critical pairs**, given a rewrite system. Remember that the rewrite system is given to us as a list of pairs of terms. The desired output is also a list of pairs of terms, which are the critical pairs of the system.

$\forall$**rules** For each pair of rules (l_1, r_1) and (l_2, r_2),

Rename Rename the variables of the two rules such that they are disjoint

$\forall$**subterms** For each context C and non variable term l_1' such that $l_1 = C[l_1']$,

If $S = mgu(l_1', l_2)$,

Add $(S(r_1, S(C[r_2]))$ to the list of critical pairs.

$\forall$rules also includes the case with $l_1 = l_2$ and $r_1 = r_2$. Notice that in $\forall$subterms, we need to remember the context while taking the non variable subterms of l_1. A context can be a function of type ($\texttt{term} \to \texttt{term}$).