

**MR1168734 (93f:68054)** 68Q42 68Q10 68Q60

**Akkerman, G. J.** (NL-UTRE-Q); **Baeten, J. C. M.** (NL-MATH-ST)

**Term rewriting analysis in process algebra.**

*CWI Quarterly* **4** (1991), no. 4, 257–267.

ACP, the algebra of communicating processes, is an algebraic approach to modeling the behavior of concurrent systems. Its objects are structures consisting of a set of actions together with some operations such as choice, left-merge, sequencing and communication. These operations are subject to a number of equalities or laws, which may also be considered as rewrite rules on the corresponding term algebra.

For a certain subset of  $ACP^\tau$ —a variant of ACP that also includes the so-called “silent step”  $\tau$ —the authors show that the corresponding term rewriting system is confluent and terminating. The argument is based on a modification of Knuth-Bendix completion due to G. E. Peterson and M. E. Stickel [*J. Assoc. Comput. Mach.* **28** (1981), no. 2, 233–264; MR0612079 (83d:03037)].

*Peter R. J. Asveld* (NL-TWEN-C)