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On asynchrony in name-passing calculi. (English) Zbl 0910.03019

Larsen, Kim G. (ed.) et al., Automata, languages and programming. 25th international colloquium, ICALP '98. Aalborg, Denmark, July 13–17, 1998. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 1443, 856-867 (1998).

Summary: We study an asynchronous π-calculus, called Local π (Lπ), where: (a) only the output capability of names may be transmitted; (b) there is no matching or similar constructs. We study the basic operational and algebraic theory of Lπ and show some applications: the derivability of delayed input; the correctness of an optimization of the encoding of call-by-name λ-calculus; the validity of some laws for the Join-calculus.

For the entire collection see [Zbl 0893.00039].

MSC:

03B70 Logic in computer science
03B40 Combinatory logic and lambda calculus

Keywords:

process calculi; asynchronous π-calculus; call-by-name λ-calculus; Join-calculus