Katalin Bimbó* (bimbo@ualberta.ca), 2-40 Assiniboia Hall, Department of Philosophy, University of Alberta, Edmonton, Alberta T6G2E7, Canada. On the decidability of the multiplicative–exponential fragment of linear logic.

Kripke proved the decidability of the implicational fragment of the logic of relevant implication (see [4]). Other relevance logics have been proved decidable relying on the same method of proof. (See, for example, [3, §§3.6–3.9], [2] and [1].) The decidability problem of the multiplicative–exponential (i.e., intensional) fragment of (classical) linear logic remained open for decades. I show that this fragment is decidable. The proof relies on sequent calculi, and combines appropriate versions of three lemmas, which are often referred to as Kö nig’s, Kripke’s and Curry’s.


