

Fast Cut Elimination in Intuitionistic Logic

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In classical logic, for every k there is an elementary function bounding the cut free proofs wrt proofs with $\leq k$ quantifier alternations when the quantifiers are shifted to prenex form. This result does not hold for intuitionistic logic, but there is an elementary function, when k bounds the number of blocks of universal quantifiers and existential quantifiers occurring in cut formulas. In case the rules for \forall are delayed, this result holds for arbitrary blocks of quantifiers.