ERNA + TRANSFER

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[Joint work with C. Impens.[1]]

ERNA (Elementary Recursive Nonstandard Analysis) is a fragment of PRA in which functions are not allowed to grow faster than superexponentially, a restriction which is essential for a 'finitistic' consistency proof in PRA. We prove that a Π_1-transfer principle can be added to ERNA, and that this stronger theory still has a finitistic consistency proof. We use this rudimentary form of transfer to prove a supremum-up-to-infinitesimals principle for standard quantifier free formulas. Finally, we discuss Π_2 and Π_3-transfer.

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