

Multivariate Higher Order Monotonicity – and its Preservation

Paul Ressel

Higher order monotonic functions in one variable are well known, contrasting the multivariate situation where there exist many different notions of monotonicity. The basic one characterizes distribution functions, and is in fact closely connected to univariate higher order monotonicity. The natural problem to identify the functions that operate on several distribution functions, leads to a multivariate degree of monotonicity, and will be solved for the two different but related cases of separate, resp. equal variables.