

# Completely monotonic functions and inequalities for multinomial coefficients and multivariate beta functions

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## ABSTRACT

In this talk, we extend a function arising from the Bernoulli trials in probability and involving the gamma function to its largest ranges, find logarithmically complete monotonicity of these extended functions, and, in light of logarithmically complete monotonicity of these extended functions, derive some inequalities for multinomial coefficients and multivariate beta functions. These results recover, extend, and generalize some known conclusions.

## REFERENCES

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