

Edgeworth approximation and Cumulants

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In this talk, a survey on some results related to cumulants is provided. These cumulants are considered in the context of additive models, which are linear models where the coefficients of the random vectors do not need to follow a normal distribution. We will show the functional relationship between the coefficients of Edgeworth approximation and the cumulants and we conclude by estimating cumulants for additive models.

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References

- [1] C. C. CRAIG (1931). On A Property of the Semi-Invariants of Thiele. *Annals of Mathematical Statistics*, 2 (2), 154-164.
- [2] M. G. KENDALL, A. Stuart & J. K. Ord (1994). *Kendall's Advanced Theory of Statistics, Volume1: Distribution Theory*, 6th Edition. New Jersey: Wiley-Blackwell.
- [3] J. E. KOLASSA. *Series Approximation Methods in Statistics*, Springer-Verlag, New York, 2006.