

The Bennett Orlicz norm

Invited Talk

Conference on probability and statistics in high dimensions.

A scientific tribute to Evarist Giné

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by

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Abstract: Exponential tail bounds of the type proved by Bennett (1962) for sums of bounded random variables also hold in problems involving Poisson and weighted Poisson random variables. In this talk I will discuss properties of what I call the “Bennett Orlicz norm”. I will compare the new Bennett Orlicz norm to the “Bernstein Orlicz norm” of van de Geer and Lederer (2013), and discuss relationships with recent results of Major and Baraud. (Based in part on joint work with Evan Greene and Johannes Lederer.)