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Aurel I Stan* (stan.7@osu.edu). *A study of probability measures in terms of their quantum operators.* Preliminary report.

The quantum and number operators of a random variable, having finite moments of all orders, will be presented first. Then some commutator relationship involving these operators will be discussed. A decomposition of these operators in terms of the multiplication operator by X and differentiation operator D will be presented next. We end the talk with a concrete example leading to the Gegenbauer orthogonal polynomials. (Received January 18, 2022)