1113-28-49   **Joseph Rosenblatt*** (`joserose@iupui.edu`), Department of Mathematical Sciences, 402 N. Blackford St., Indianapolis, IN 46202-3216. *Characterizing convergence via jump inequalities.* Preliminary report.

Many convergent stochastic processes satisfy strong quantitative estimates for their jumps i.e. quantitative Cauchy conditions. Examples include ergodic averages, martingales, and Fourier series. These quantitative jump inequalities are proved by deriving strong inequalities for series that measure the variational behavior of the process. These results on the variational behavior of the process are often difficult to derive. However, we know that some forms of these strong estimates for the variational behavior are equivalent to quantitative jump inequalities. This suggests that we try to show that for a wide class of stochastic process their almost everywhere convergence is actually equivalent to there being a quantitative jump inequality. (Received August 05, 2015)