

1104-94-337

Michael E O'Sullivan* (mosullivan@mail.sdsu.edu), Department of Mathematics and Statistics, San Diego State University, San Diego, CA 92182. *Remarks on non-Shannon information inequalities*. Preliminary report.

Let X_1, \dots, X_n be discrete random variables and, for a nonempty $A \subseteq \{1, \dots, n\}$, let X_A be the random vector indexed by A . The vector of entropies $H(X_A)$ indexed by A satisfies inequalities discovered by Shannon as well as numerous non-Shannon inequalities discovered by Zhang and Yeung, Dougherty et al, Matus, and others. I will discuss these inequalities and Matus's technique of adhesion of polymatroids, after a linear transformation related to Yeung's information diagrams. (Received September 03, 2014)