1147-68-65   **Ryo Nomura*** (`nomu@isc.senshu-u.ac.jp`). *Random Number Generation Problems with respect to f-Divergence.* Preliminary report.

This presentation deals with the two random number generation problems such as the source resolvability problem and the intrinsic randomness problem. In the literature, the optimum achievable rates in both problems with respect to the variational distance as well as the Kullback-Leibler (KL) divergence have already been analyzed. On the other hand, in this study we consider the problem with respect to a subclass of f-divergence. The f-divergence is a general non-negative measure between two probabilistic distributions and includes several important measures such as the total variational distance, the KL divergence, Hellinger distance and so on. We derive the general formula of the optimum achievable rate for this subclass of f-divergence. (Received November 20, 2018)