1152-37-431 **Doğan Çömez***, Minard 408, 1210 Albrecht Boulevard, Fargo, ND 58108, and **Mrinal Kanti Roychowdhury**. *Canonical sequences for the optimal quantization of condensation measures.* Preliminary report.

Let $S_1(x) = cx,\ S_2(x) = cx + r$, for all $x \in \mathbb{R}$, where $0 < c \leq \frac{1}{2}$ with $c + r = 1$ and ν be a Borel probability measure on $\mathbb{R}$ with compact support. We consider condensation systems $(\mathcal{S}, \mathbf{a}, \nu)$, where $\mathcal{S} = \{S_i\}_{i=1}^2$ are similarity maps and $\mathbf{a} = (a_1, a_2, a_3)$ with $a_1+a_2+a_3 = 1$, with the associated condensation measure $P := a_1 P \circ S_1^{-1} + a_2 P \circ S_2^{-1} + a_3\nu$. Let $D(P)$ denote the quantization dimension of the measure P. We study self-similar measures ν satisfying $D(\nu) > \kappa$, $D(\nu) < \kappa$, and $D(\nu) = \kappa$, respectively, where $\kappa = -\frac{\log 2}{\log c}$. For particular cases of c, r and $\mathbf{a}$, we show that there exist sequences $a(n)$ and $F(n)$, which are utilized to determine the optimal sets and associated quantization errors for the measure P. We also show that for each measure ν the quantization dimension $D(P)$ of the measure P exists and satisfies $D(P) = \max\{\kappa, D(\nu)\}$. It turns out that, for $D(\nu) > \kappa$, the $D(P)$-dimensional lower and upper quantization coefficients are finite, positive and unequal; and for $D(\nu) \leq \kappa$, the $D(P)$-dimensional lower quantization coefficient is infinity. (Received September 09, 2019)