

## FUNCTIONAL LIMIT THEOREMS FOR PROBABILITY MEASURES ON HYPERGROUPS

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*Abstract:* Let  $K$  be a hypergroup with left Haar measure and  $(\nu_n)$  a sequence of symmetric probability measures on  $K$  converging to  $\epsilon_e$ . We will prove a functional limit theorem in the sense that convergence  $\nu_n^{k_n} \rightarrow \mu \in \mathcal{M}^1(K)$  implies unique embeddability of  $\mu$  into a symmetric convolution semigroup  $(\mu_t)_{t \geq 0}$  and  $\nu_n^{[k_n t]} \rightarrow \mu_t$  holds for all  $t > 0$ . This generalizes the corresponding result for hermitian hypergroups. Furthermore, by analogy with locally compact groups, it can be shown that for specific hypergroups similar results are available without symmetry assumptions.

**2000 AMS Mathematics Subject Classification:** 43A62, 60B10, 60B15, 60E07, 60G51.

**Key words and phrases:** Hypergroups, functional limit theorem, infinitely divisible laws, embedding.

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