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Simplex Codes Over the Ring  $\sum_{n=0}^s u^n F_2$



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 [Keywords](#)  
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**Abstract:** In this paper, we introduce simplex linear codes over the ring  $\sum_{n=0}^s u^n F_2$  of types  $\alpha$  and  $\beta$ , where  $u^{s+1}=0$ . And we determine their properties. These codes are an extension and generalization of simplex codes over the ring  $Z_2^s$ .

**Key Words:** Simplex codes, chain rings,  $Z_p^s$ -codes and  $\sum_{n=0}^s u^n F_2$ -linear codes



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