

1057-94-52

**Yoonjin Lee\*** ([yoonjin1@ewha.ac.kr](mailto:yoonjin1@ewha.ac.kr)), Department of Mathematics, Ewha Womans University, 11-1 Daehyun-Dong, Seodaemun-Gu, Seoul, 120-750, South Korea. *Construction of MDS self-dual codes and quasi-cyclic self-dual codes.*

We present our development on an efficient construction method (so called *building-up construction*) of MDS self-dual codes and quasi-cyclic self-dual codes. Using this method we produce many new MDS or near MDS self-dual codes over various finite fields or finite chain rings. We also find many quasi-cyclic self-dual codes over finite fields via this construction. In fact, every self-dual code over a finite field can be obtained by this method. (Received December 23, 2009)