1024-94-107 **T. Aaron Gulliver** (agullive@ece.uvic.ca), Dept of Electrical and Computer Engineering, University of Victoria, Victoria, BC V8W 3P6, Canada, **Jon-Lark Kim*** (jl.kim@louisville.edu), Department of Mathematics, University of Louisville, Louisville, KY 40292, and **Yoonjin Lee** (yoonjinl@sfu.ca), Department of Mathematics, Simon Fraser University, Burnaby, BC V5A 1S6, Canada. *MDS or Near-MDS Self-Dual Codes.*

We construct new MDS or near-MDS self-dual codes over large finite fields. In particular we show that there exists a Euclidean self-dual MDS code of length $n = q$ over $GF(q)$ whenever $q = 2^m$ $(m \geq 2)$ using a Reed-Solomon code and its extension. It turns out that this MDS self-dual code is an extended duadic code. We construct Euclidean self-dual near-MDS codes of length $n = q - 1$ over $GF(q)$ from Reed-Solomon (RS) codes when $q \equiv 1 \pmod 4$ and $q \leq 113$. We also construct many new MDS self-dual codes over $GF(p)$ of length 16 for primes $p \leq 113$. Finally we construct Euclidean/Hermitian self-dual MDS codes of lengths up to 14 over $GF(q^2)$ where $q = 19, 23, 25, 27, 29$. (Received January 03, 2007)