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**Tingyao Xiong\*** (xiongtin@msu.edu), Math Department of Mathematics, Michigan State University, East Lansing, MI 48823, and **Hall I. Jonathan.** *Construction of Even Length Binary Sequences with High Asymptotic Merit Factor.* Preliminary report.

The known binary sequences having the asymptotic merit factor  $\geq 6$  are the modifications to the prime character sequences. In this paper, we show that at  $N = pq$ , there are many modifications other than the modified Jacobi sequences proposed by Jensen and Hohøldt in 1991. Furthermore, we will give new modifications to the character sequences of length  $N = p_1 p_2 \dots p_r$ , where  $p_i$ 's are distinct odd primes. Based on these new modifications, we can construct a binary sequence of length  $2N$  so that such families of sequences have asymptotic merit factor 6.0 without cyclic shifting on the base sequences. (Received September 11, 2009)