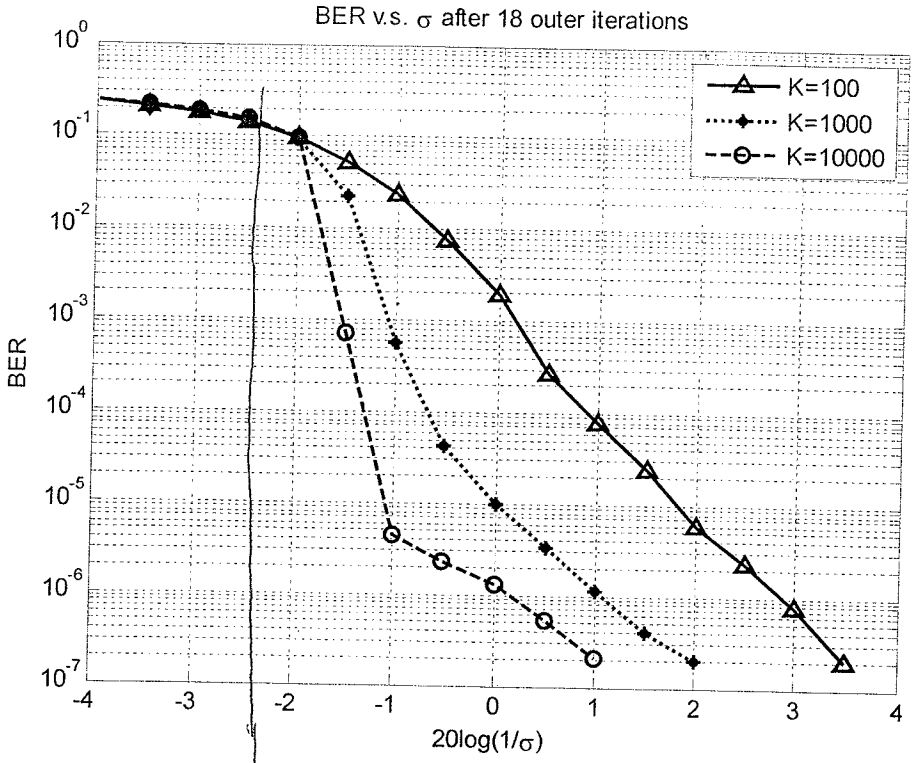
The figure was generated by Mr. Hanting Chiang in his HW5 solution for fall 2009.



Shannon capacity with Gsn alphabet

$$\frac{1}{2}\log_2(1+SNR)=\frac{1}{3}\ (\text{bit/symbol})$$

$$10\log_{10}(SNR)\approx -2.31\ dB$$

Shannon capacity with antipodal input.

$$SNR^*\approx -2.2588\ dB$$