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*On some extremal problems.* Preliminary report.

We discuss some minmax extremal problems for polynomial and rational functions. We also present results related to asymptotics of singular numbers of Hankel matrices,  $n$ -widths and the degree of rational approximation of Markov functions on discrete sets. The results obtained are based on extremal problems of potential theory, central among which is the problem of equilibrium in an external field. (Received July 22, 2017)