1012-05-198          **Rihards Opmanis\*** (`rihardso@latnet.lv`), Raina bulvaris 29, Riga, LV-1495 Riga, Latvia.
*Kirkman type combinatorial designs.* Preliminary report.

Thomas Penyngton Kirkman published Fifteen Schoolgirls Problem in the Lady's and Gentleman's Diary of 1850. There are some well-known Boolean functions that have many values of variables known in order to find the values of the function, but have a small degree of the representing polynomial like Kushilevitz function, but for all of it has few numbers of variables ($<9$). In this talk we will demonstrate several combinatorial designs that are based on Kirkman Schoolgirl problem solution ideas, and theorems that could be useful for constructing such functions with bigger count of variables (at least 10). (Received September 20, 2005)