Dezsõ Miklós

A.Rényi Institute, Budapest, Hungary

Upper bound on the number of independent functional dependencies

We will investigate the following question: what can be the maximum number of independent functional dependencies in a database of n attributes, that is the maximum cardinality of a system of dependencies which do not follow from the Armstrong axioms and none of them can be derived from the remaining ones using the Armstrong axioms. A construction (lower bound) of size and an upper bound of $\left(1 + \frac{c}{\sqrt{n}}\right)\binom{n}{\left\lfloor \frac{n}{2} \right\rfloor}$ (where $c = \sqrt{\frac{\pi}{2}}$) will be given.