

Quasi-random Boolean functions.

Fan Chung
University of California, San Diego

We organize a number of analytic and combinatorial properties of Boolean functions into a hierarchy of equivalence classes in a similar style as quasi-random graphs, but depending on 'local' parameters. We construct quasi-random Boolean functions that separate different levels of the quasi-random hierarchy. In addition, we will briefly survey various well known notions of pseudo-randomness for Boolean functions and explore their relations to the quasi-random hierarchy.

This is a joint work with N. Sieger.