

1040-05-47

Gabor Elek* (elek@renyi.hu), The Alfred Renyi Institute of the, Hungarian Academy of Sciences, Reáltanoda u. 13-15 POB 127, Budapest, Hungary. *Regularity theorems for graphs of bounded degree.*

We prove a regularity theorem for bounded degree graphs of subexponential growth. As an application we show that the edit-distance from a monotone property is testable via random samplings in the graph category above. Using the regularity lemma one can also prove various results for the uniform existence of integrated density of states as well as the convergence of certain infinite volume limits. (Received January 14, 2008)