

Logarithmic convergence of projective planes

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The notion of logarithmic convergence of graphs was introduced by Szegedy in order to study sequences of sparse graphs. We answer positively a question of Szegedy, whether the sequence $(G_q)_q^\infty$ of the incidence graphs of finite projective planes log-converges and whether the limit coincides with that of a particular random graph model. Moreover, we show that the sequence is still convergent if q ranges not just over primes, but over prime powers. Joint work with Márton Borbényi, Panna Fekete and Aranka Hrušková.