

When a random triangular group is free

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The random triangular group $\Gamma(n, p)$ is a group generated by a random group presentation with n generators and with relators of length three, where each such relator is taken independently with probability $p = p(n)$. In the talk we show that the property that $\Gamma(n, p)$ is a free/non-free group is strictly connected with the property that the random 3-uniform hypergraph has empty/non-empty 2-core.

Joint work with Tomasz Łuczak, Tomasz Prytuła, and Piotr Przytycki.