Abstract

Consider the Erdős-Rényi random graph $G(n, M)$ built with n vertices and M edges uniformly randomly chosen from the set of $\binom{n}{2}$ edges. Let L be a set of positive integers. For any number of edges $M \leq \frac{n}{2} + O(n^{2/3})$, we compute – via analytic combinatorics – the number of isolated cycles of $G(n, M)$ whose length is in L.