Pu Gao* (pu.gao@uwaterloo.ca), Waterloo, Ontario N2L 3G1, Canada, and Mikhail Isaev and Brendan McKay. Sandwiching random regular graphs by binomial random graphs.
Random regular graphs are among the best known random graph models. However, they are hard to analyse, especially when the degree grows with the number of vertices. In 2004 Kim and Vu conjectured that if $d \gg \log n$ then the random $d$-regular graph $G$ can be coupled with two binomial random graphs $G\left(n, p_{1}\right)$ and $G\left(n, p_{2}\right)$ such that both $p_{1}$ and $p_{2}$ are asymptotic to $d / n$, and with high probability, $G\left(n, p_{1}\right) \subseteq G \subseteq G\left(n, p_{2}\right)$. We prove this conjecture for all $d \gg n / \sqrt{\log n}$, and we prove an approximate version of the conjecture for smaller $d$. This is joint work with Mikhail Isaev and Brendan McKay. (Received August 17, 2020)

