

■ A research work by Yuri Malyshev and Elliot Paquette(2015) considered a model where the half-edge of the new vertex at time $t + 1$ was attached to the smallest degree vertex among d many which were preferentially chosen from the existing graph at time t , with replacement.

- The asymptotic order of the maximal degree vertex was found to be of order $\frac{\log \log t}{\log d} + \Theta(1)$.

■ Another research work by Yuri Malyshev(2017) considered attaching the half-edge of the new vertex to the highest degree vertex among d many, which were sampled with replacement with probability proportional to their degrees plus some parameter $\beta > -1$. The number of neighbours to choose in each time-step, i.e., the parameter d was taken to be random.

- For $\mathbb{E}d < 2 + \beta$, the maximal degree had a sublinear asymptotic order;
- For $\mathbb{E}d = 2 + \beta$, it was of order $\frac{t}{\log t}$;
- For $\mathbb{E}d > 2 + \beta$, the maximal degree had a linear asymptotic order