

1147-05-516

Yongxin Lan and **Henry Liu*** (liaozhx5@mail.sysu.edu.cn), School of Mathematics, Sun Yat-sen University, 135 Xingang Road W, Guangzhou, Guangdong 510275, Peoples Rep of China, and **Zhongmei Qin** and **Yongtang Shi**. *Degree powers in graphs with a forbidden forest.*

For a graph G with degree sequence d_1, \dots, d_n , and for a positive integer p , let $e_p(G) = \sum_{i=1}^n d_i^p$. In 2000, Caro and Yuster [A Turán type problem concerning the powers of the degrees of a graph, Electron. J. Combin. 7 (2000), R47] introduced the following Turán type problem: *Given a positive integer p and a graph H , determine the function $\text{ex}_p(n, H)$, which is the maximum value of $e_p(G)$ taken over all graphs G on n vertices that do not contain H as a subgraph.* Obviously, we have $\text{ex}_1(n, H) = 2\text{ex}(n, H)$, where $\text{ex}(n, H)$ denotes the classical Turán function. Previous results on this problem, obtained by various authors, include the determination of the function $\text{ex}_p(n, H)$ when H is a complete graph, a cycle, a path, and a star. In this talk, we shall present some new results for the function $\text{ex}_p(n, H)$ when H is a certain type of forest, namely, a linear forest, a star forest, and a broom (i.e., a path with a star at one end). (Received January 25, 2019)