

1135-05-2458

Guantao Chen, Zhicheng Gao, Songling Shan* (songling.shan@vanderbilt.edu) and **Xingxing Yu**. *Circumferences of 3-connected graphs with bounded maximum degrees*. Preliminary report.

In 1993 Jackson and Wormald conjectured that for any positive integer d with $d \geq 4$, there exists a positive real number α depending only on d such that if G is a 3-connected n -vertex graph with maximum degree at most d , then G has a cycle of length at least $\alpha n^{\log_d - 1}$. They showed that the exponent in the bound is best possible if the conjecture is true. We confirm the conjecture for $d \geq 370$. (Received September 26, 2017)