

Guangzhou Discrete Mathematics Seminar



*Graphs with girth 9 and without
longer odd holes are 3-colorable*

Rong Wu

Shanghai Jiao Tong University, Shanghai, China

5 January 2024 (Friday), 4:30pm to 5:30pm

Room 519, School of Mathematics, Sun Yat-sen University

Tencent meeting ID: 121 027 368

For a number $l \geq 2$, let \mathcal{G}_l denote the family of graphs which have girth $2l + 1$ and have no odd hole with length greater than $2l + 1$. Wu, Xu and Xu conjectured that every graph in $\bigcup_{l \geq 2} \mathcal{G}_l$ is 3-colorable. Chudnovsky et al., Wu et al., and Chen showed that every graph in \mathcal{G}_2 , \mathcal{G}_3 and $\bigcup_{l \geq 5} \mathcal{G}_l$ is 3-colorable respectively. In this paper, we prove that every graph in \mathcal{G}_4 is 3-colorable. This confirms Wu, Xu and Xu's conjecture.

Guangzhou Discrete Mathematics Seminar

Website <http://www.gzdmseminar.cn>

Mirror site <http://www.cantab.net/users/henry.liu/gzdmseminar.htm>



QR code of the
seminar series