

1067-05-2416

Xingxing Yu*, School of Mathematics, Georgia Tech, Atlanta, GA 30332, and **Jie Ma**, School of Mathematics, Georgia Tech, Atlanta, GA 30332. *K_5 -subdivisions in 5-connected nonplanar graphs.*

Kuratowski's theorem states that a graph is planar iff it contains no subdivision of K_5 or $K_{3,3}$. Seymour and independently Kelmans conjectured in the 1970s that every 5-connected nonplanar graph contains a subdivision of K_5 . We show that this is true when the graph contains K_4^- as a subgraph. We also show that why excluding K_4^- is useful. Joint work with Jie Ma. (Received September 23, 2010)