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D. Christopher Stephens* (chris.stephens@mtsu.edu). *On H -graphs and rooted subdivisions of K_4 .*

In 1998, Yu characterized the obstructions to rooted subdivisions of K_4 in 4-connected planar graphs. One of the key steps is the case in which two of the branch vertices are separated from the other two branch vertices by a 4-cut. In this case, the existence of the desired K_4 subdivision depends on the existence of so-called “crossing H -graphs.”

In this talk, we discuss the crossing H -graph problem in the context of 4-connected graphs which are not planar. (Received December 04, 2012)