

Progress on the orientable genus of complete tripartite graphs

Mark Ellingham*, Vanderbilt University

Chris Stephens and Xiaoya Zha, Middle Tennessee State University

In 1969 White conjectured that the genus of the complete tripartite graph $K_{l,m,n}$, with $l \geq m \geq n$, is $\lceil (l-2)(m+n-2)/4 \rceil$. The problem naturally breaks into sixteen cases according to the values of m and n modulo 4. Solutions for twelve of these cases are known. Here we discuss recent progress on the remaining four cases, which occur when m is odd and n is even.