

1077-05-1696

**Yichao Chen\*** (ycchen@hnu.edu.cn), College of Mathematics and Econometrics, HuNan University, ChangSha, HuNan 410082, Peoples Rep of China. *On the total embeddings for some types of graphs.*

Genus distributions problems have frequently been investigated in the past quarter century, since the topic was inaugurated by Gross and Furst. However the total embedding distribution of a graph, including the non-orientable embeddings, is known for relatively few classes of graphs, compared to the genus distribution. In this talk, we find explicit formula for the total embedding distribution of some well-known classes of graphs like: Closed-end ladders, Ringel ladders, Mobius ladders, circular ladders and Fan graphs etc. Our formula here is derived with the aid of Mohar's overlap matrices , Gustin's representation of rotation systems for cubic graphs, the Chebyshev polynomials of the second kind and a splitting technique for embedding distribution. (Received September 20, 2011)