**LUC VINET**, C R M
*Entanglement of Free Fermions on Graphs*

The entanglement of free fermions on Hamming graphs will be discussed. This will be used to showcase how tools of algebraic combinatorics such as the Terwilliger algebra are well suited for this analysis. The usefulness of a Heun operator generalization will also be stressed and extensions to other association schemes will be mentioned.