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**Tuesday, October 20, 2020, at 10:00 (Boston)
15:00 (UK/Eire) 16:00 (C.Europe) 22:00 (China)
Mathematical Picture Language Seminar**

Zoom at: <https://harvard.zoom.us/j/779283357?pwd=MitXVm1pYUIJVzZqT3lwV2pCT1ZUQT09>

“Exploring small fusion rings and tensor categories”

Joost Slingerland, National University of Ireland Maynooth

Abstract: I discuss some strategies for finding fusion rings of low rank (or if you prefer, fusion rules for a small number of objects) and corresponding tensor categories, or solutions to pentagon and hexagon equations. Since developing these, we have produced a large database of fusion rings by computer search, including many that we were unfamiliar with ourselves. I hope to describe the features of some of these and their generalizations at higher rank, particularly focusing on some of the less well known or studied examples, such as various rings with non-Abelian fusion. Secretly I am of course hoping that the audience will recognize some of these and share interesting information about them! This is very much work in progress. I also hope to say something about potential applications, for example to anyons on wire networks, and will briefly introduce some tools we are building to make it easy to explore and use these rings and categories.

