

Math/Phys seminar April 2

Speaker: Alexander Garballi (University of Melbourne, Australia)

Where: Zoom (<https://purdue->

[edu.zoom.us/j/98710892098?pwd=dTVUMjdTTFFvSW9qYXlqZjBjYVJwdz09](https://purdue-edu.zoom.us/j/98710892098?pwd=dTVUMjdTTFFvSW9qYXlqZjBjYVJwdz09) , Meeting ID: 987 1089 2098,
Passcode: 417827)

Title: Shuffle algebras and lattice paths

Abstract: In recent years many interesting results in mathematical physics have been obtained with the help of shuffle algebras. A notable example is the trigonometric Feigin—Odesskii (FO) shuffle algebra. In this talk I will discuss a connection between Yang—Baxter integrable vertex models and the commutative subalgebra of the FO shuffle algebra. This connection allows us to compute a family of partition functions of vertex models in terms of elements of the commutative FO shuffle algebra. Our results imply similar relations between other shuffle algebras and integrable vertex models.