COMBINATORICS OF FEYNMAN DIAGRAMS LECTURE 1 SUMMARY

WINTER 2018

Summary

Today we began with an overview of how I see four main directions or perspectives contributing to the things we will discuss in this class. The four are

- enumerative combinatorics
- graph theory
- algebra
- high energy physics

Then we went over some administrative things and you helped decide on some details of the course. This is all in the syllabus which is posted on the website `http://www.math.uwaterloo.ca/~kayeats/teaching/co739.html`.

Then we did an activity to get a feel for everyone's background. One of the strengths of the course will be our different backgrounds. I hope that many of you who attended will sign up for the course and that many of you who don't sign up will still attend. Also, if you didn't come today you are still very welcome to join the course. If you think it's interesting then please spread the word!

Next time

Next class we will start on graph counting by 0-dimensional field theory, though the first thing we will need to do in that regard is to review some of the theory of formal power series.

References

A mathematical reference for the upcoming graph counting section is chapter 3 of "Graphs on surfaces and their applications" by Lando and Zvonkin (Springer 2004).