MARCEL GOLZ, University of Waterloo

Chord diagrams in perturbative quantum electrodynamics

Feynman graphs in quantum electrodynamics are essentially chord diagrams with photons taking the role of chords attached to lines or cycles given by electrons. I will discuss some of the ways combinatorial methods involving chord diagrams simplify the associated Feynman integrals and in particular the computation of traces and contractions of Dirac matrix products.