Topic 9 – Spinors III and Actions

Pre-Lecture Reading/Post-Lecture Summary

Today we will learn how to use spinors and gamma matrices to build vectors and more general tensors as well. We might even chat a little bit more about the whole confusing mess of spinors and gamma matrices and the weird folks that like them. So bring your questions. Our attention will then turn to action principles with a refresher on how extremizing an action functional leads to the Euler-Lagrange equations of motion. Hell, we will also define most of the words in the preceding sentence along the way! We will start in a non-relativistic point particle setting with which many of you will be familiar. Then we will generalize the story to the situation more relevant for this course, i.e. relativistic fields. Then you will leave and be happy.