QFT Homework 6 Due 27 Oct 2022

This homework is due to `https://uwcloud.uwinnipeg.ca/s/Xks9XWXz9yo5CpG` by 10:59PM on the due date. Your file(s) must be in PDF format; they may be black-and-white scans or photographs of hardcopies (all converted to PDF), PDF prepared by LaTeX, or PDF prepared with a word processor *using an equation editor*.

I have listed your name with the problem you will present on 21 Sept. Note that you only need to hand in the first section of problems for a grade.

Reading Assignment: Srednicki chapter 14

Not to be marked Do not submit your answers for the following questions

1. **Total Solid Angle in Any Dimension** *Srednicki 14.2* Presentation: Zunaira

2. **Integral Identities** *Srednicki 14.3* Presentation: Bardh

3. **Complex Scalar Propagator** *Srednicki 14.6* Presentation: Phil

   There is only a small difference compared to the solution to Srednicki 14.5. How does it carry through?

For a grade Submit your answers for the following questions

4. **Propagator Correction in ϕ^4 in 4D** *Srednicki 14.5* Presentation: Naman

   Work in a general number d of dimensions and take the limit of $d \to 4$ at the end.