

## Lecture 1

July-11-11  
2:06 AM

Before lecture:

- ✓ 0. Print this page.
  - ✓ 1. Distribute handouts.
  - ✓ 2. Set up video camera
  3. Set up projector
- } In place  
even before  
prev. speaker.

Lecture:

0. Video recording does not suggest quality.  
The presence of a colour handout does not suggest that we will follow it.
  1. A word about the overall subjects "expansions"  
Much like Taylor, have power (approximate, case solving, carriers of comb. information) & weaknesses. A little more surprising is their Depth.
  2. The base plan: Expansions are The Thread connecting physics to topology to algebra.  
..... reality may be different.  
..... display the handouts.
- } show web page.

3. Show of hands: How many of you, given a Lagrangian, would know why & how to write the corresponding "Feynman Expansion into Feynman Diagrams"?  
(... that would be our second topic ...)

4. splash scene: The Stonehenge Story.  
(then splash the CS path integral)

5. Go over Feynman diagrams in  $\mathbb{R}^n$  the Fourier way, inquire whether to prove the Fourier transform for Gaussians.