

Questions – Week 13

Lecture 23 – The Stress Tensor in 2d CFT

April 12, 2016

In Hartman:

1. Could we go over how to get equation 23.29?
2. Any simple examples of theories with non-invariant action and measure that conspire to give an invariant path integral?
3. What's the radius of convergence of the OPE. Does it change away from conformality? Does the radius of convergence have a physical significance?
4. Is the OPE of any use in vanilla QFT, have we ever used it in our QFT course without knowing it?

In Di Francesco:

1. I remember discussing this at some point but it's still not clear. Concerning the definition of the delta function, they show that it works for a holomorphic and an anti-holomorphic function but can we show that it behaves as expected on a general function?
2. How do we get (5.44) from integrating (5.42)?
3. I don't think I have actually seen the real version of Wick's theorem in QFT so how do we derive the result of (5.83) using it?