

Questions to Alex

21 sierpnia 2022

Our questions are:

1. Is $A_j = B_j + 1$ or maybe we can formulate it as $A_j = B_j$? If no, then from our hand calculations element

$$h = ve^{ik} + we^{-ik} \neq v + we^{-ik}$$

2. If we put PBC, we can calculate the Winding number using infinity trick, but the we don't have edge states we want to feed our machine with. Is this a problem, and if not, then how?
3. When we add disorder, should we show to the machine singular realizations, or an image averaged out pver i.e. 10 realizations.
4. If we average out the image, should assigned winding number also be an average over realizations winding numbers?
5. If we end up with non-integer winding numbers, how should we assing labels? Round up to nearest integer?
6. After calculations we ended up with

$$\text{tr}(h^{-1}\partial_k h) = -\frac{ib^2}{b^2 - a^2e^{ik}} \neq \partial_k \log(v + we^{-ik}) = -\frac{iw}{w + ve^{ik}},$$

what would mean that

$$w = b^2, \quad v = -a^2$$