Collaboration with people in University of Maryland (UMD)

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During the period October 2020 – May 2021, I joined the collaboration with the excellent people in Maryland, Srivatsa Tata, Danny Bulmash, and Maissam Barkeshli. The collaboration was about the study of the (2+1)-dimensional fermionic topological phases with global symmetries, and we were able to establish a generic and powerful framework of characterizing the symmetry-enriched fermionic topological phases via topological invariants. Moreover, we found a way to compute the quantum anomaly of the fermionic topological phases in a systematic way. This paper was recently submitted on arXiv.

I joined this collaboration after I gave a job talk at UMD on October, and I helped them with the computation of the anomalies of fermionic topological phases. During this collaboration, it has been a great pleasure to work with and learn a lot from Danny and my future supervisor Maissam. In particular I must single out Sri for being a talented colleague and all his work in the collaboration. He had a thorough understanding on the intricate description of (3+1)-dimensional fermionic topological phases, and he never shied away from any seemingly impossible computation.

Due to their deep understanding on topological phases, I learned a lot of new things from them including about what I initially thought I had already known, which was an amazing exprerience for me.

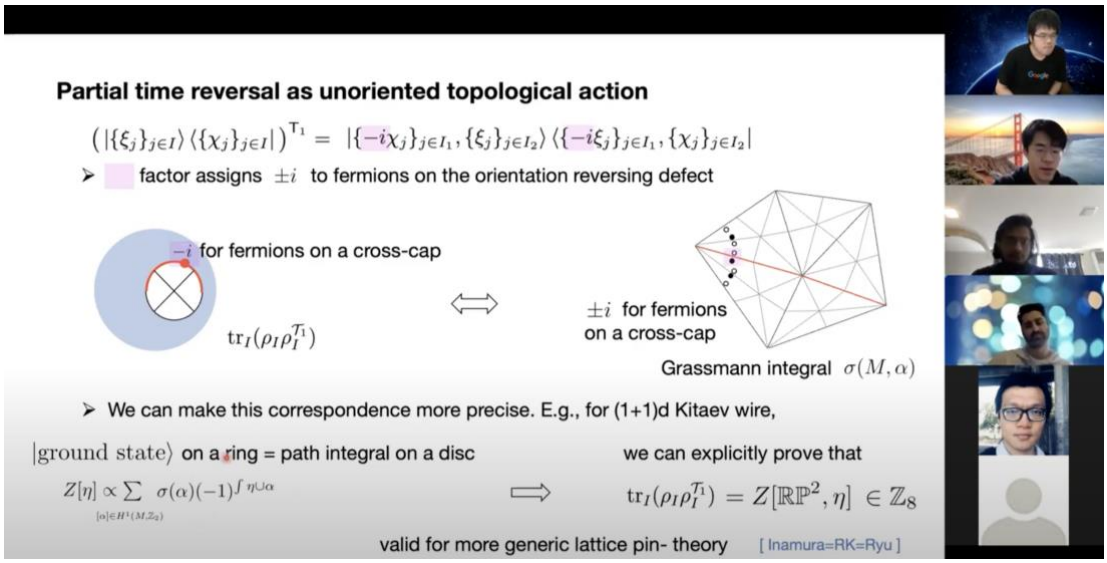

Figure: Discussion during the job talk that I gave in UMD