10th Bologna Workshop on Conformal Field Theory and Integrable Models

Bologna Workshop on:



Contribution ID: 139

Type: Talk (30 min)

GGEs, modular transforms and defects

Tuesday, 5 September 2023 11:10 (30 minutes)

We present a physical interpretation and mathematical evidence for the modular transforms of GGEs that was discussed in arXiv:2111.13950. We presented a conjecture for the modular transform of the partition function of a simple GGE in a single free fermion model as a curious product over three apparently independent sets of fermion modes. We have now generalised the result to GGEs composed of arbitrary finite combinations of higher charges and can explain this result by treating the GGE as a defect line. As further evidence we show how a specialisation of our formula is equivalent to recent work of Zagier on so-called Power Partitions.

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Session Classification: Bologna Workshop CFT-IM