Eurostrings 2024



Contribution ID: 93

Type: Talk in parallel session

Higgsing SCFTs via Decay and Fission of Magnetic Quivers

Monday 2 September 2024 14:50 (20 minutes)

We explore supersymmetric QFTs with eight supercharges. At superconformal fixed points, these theories typically lack a Lagrangian description, complicating their study. Recently, the magnetic quiver has been proposed as a tool to encode the Higgs branches of these theories. Utilizing this tool, our recent papers [1,2] propose a new algorithm: Decay and Fission of Magnetic Quivers, which performs Higgs branch RG-flows (Higgsings) on superconformal field theories (SCFTs). The power of the algorithm lies in its inherent simplicity, and I will show its application to SCFTs in dimensions d=3, 4, 5, and 6, including 4d Class S theories, Argyres-Douglas theories, 5d SQCD theories at UV fixed points, 6d orbi-instantons and higher-rank E-string. Furthermore, I will discuss the algorithm as a tool for studying the geometry of the Higgs branch as a symplectic singularity, demonstrating its advantages over previous algorithms, and providing evidence for the existence of a new isolated symplectic singularity.

[[1]] Phys. Rev. Lett. **132**, 221603 [[2]] \[2401.08757\]

Link to publication (if applicable)

1 https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.132.221603 2 https://arxiv.org/pdf/2401.08757

Authors: Prof. BOURGET, Antoine (Universit´e Paris-Saclay, CNRS, CEA, Institut de physique th´eorique); SPER-LING, Marcus (University of Vienna); ZHONG, zhenghao

Presenter: ZHONG, zhenghao

Session Classification: Parallel sessions

Track Classification: Formal QFT 2