茨城大学セミナー（1/16 月）

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日時： 2017/1/16 12:00-13:00

場所： E-301

Title： Infrared supersymmetry enhancement in 4d QFT

Abstract：We study certain N=1 preserving deformations of four-dimensional N=2 superconformal field theories (SCFTs) with non-Abelian flavor symmetry. The deformation is described by adding an N=1 chiral multiplet transforming in the adjoint representation of the flavor symmetry with a superpotential coupling, and giving the nilpotent vacuum expectation value to the chiral multiplet. Remarkably, we find classes of theories flow to N=2 supersymmetric fixed points in the infrared under the deformation. Namely the supersymmetry is enhanced in the infrared. In particular, we find renormalization group flows from the deformed conformal SQCDs with gauge group SU(N) and Sp(N) to N=2 SCFTs of Argyres-Douglas type. From these "Lagrangian descriptions," we compute the full superconformal indices and find agreements with the previous results. This talk is based on arXiv:1606.05632, arXiv:1607.04281, arXiv:1610.05311.