

Guido Festuccia: Supersymmetric Indices and RG Flows

Monday 15 May 2017 16:00 (1 hour)

Indices are a powerful tool to analyse the dynamics of supersymmetric field theories; for instance, supersymmetric indices for non-conformal susy field theories can be used to explore their RG flows.

An interesting class of indices can be defined by placing (non conformal) supersymmetric field theories on $S^d \times S^1$ preserving susy. For $N=1$ this index is related to the $N=1$ superconformal index in a simple way.

For $N=2$ superconformal theories one can also define an index but its extension to non conformal $N=2$ field theories is not possible. Nevertheless, I will show that a particular limit of the $N=2$ superconformal index, the “Schur limit”, can be defined for non conformal field theories. I will then explore the properties and uses of this index.