An Introduction to Conformal Field Theory and N=2 Superconformal Field Theories

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<u>Lecture Overview</u>

1. String Theory
    + Quantization of a vibrating string
    + Gauge symmetry and the Virasoro algebra

2. Operator Algebras
    + The Path Integral Picture
    + Vertex Operators
    + Operator Algebras

3. The N=2 Superconformal Algebra
    + Fermions
    + Supersymmetry
    + Chiral Rings and Diamonds

4. The nonlinear \sigma-model
    + The action
    + Kahler geometry
    + Hodge Diamonds
    + Old Mirror Symmetry