Leon Takhtajan: Introduction to conformal field theory: Liouville model

1. Introduction: “A historical overview from Liouville to Polyakov”

2. Basic models of conformal field theory on a Riemann sphere:

а) Case c=1: free Gaussian field (Euclidean boson massless field)
б) Case c<1: Dotsenko-Fateev’s Coulomb gas

3. Classical theory of Liouville equation and uniformization of Riemann surfaces

4. Liouville model in conformal field theory as quantum geometry of Riemann surfaces

5. From Wiener’s integration to integration over “random metrics” and other open questions