

---

**DAVID RADNELL**, American University of Sharjah  
*Determinant Line Bundles in Conformal Field Theory*

Conformal field theory requires the study of the determinant lines bundle over the moduli space of Riemann surfaces with parameterized boundary components. This moduli space is closely connected to the infinite-dimensional Teichmüller space of bordered Riemann surfaces. Additional regularity of the boundary curves is needed in the construction of the determinant line bundle, and so a refinement of the Teichmüller space must be used. A general overview of the subject will be given, followed by some recent results.