Abstract: The Riemannian metrics on a manifold are the real points of a complex domain of complex-valued metrics which has the Lorentzian metrics on its boundary. In quantum field theory the positivity of energy is encoded in the assertion that the theory extends holomorphically from Lorentzian manifolds to this complex domain. (The expression “Wick rotation” is the usual name for this extension.) The holomorphic domain of complex metrics has interesting geometric properties, suggestive both for mathematics and physics, which are especially vivid in the two-dimensional case. I shall discuss some of these properties in the talk, which is based on work in progress with Maxim Kontsevich.