Generalizations of Teichmueller Space in the Hermitian Context

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The Teichmueller space of a closed oriented Riemann surface S of genus g ¿ 1 admits an embedding into the representation variety of representations of the fundamental group G of S into PSL(2,R). The Euler number of a representation detects (by a theorem of W. Goldman) the subset of the representation variety corresponding to Teichmueller space. The Toledo invariant is a generalization of the Euler number for representations of G into Lie Groups of Hermitian type. We explain how this Toledo invariant leads to meaningful generalizations of Teichmueller space and relate them to generalization defined by Hitchin.