



## Teichmüller Theory Seminar

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# Construction of the moduli space of compact Riemann surfaces

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### Abstract

Moduli space is defined to be the set of complex structures on a compact smooth surface of genus  $g$ , and is denoted by  $\mathcal{M}_g$ . It has a natural topology and a natural (orbifold) complex structure. It also has a canonical algebraic structure: The theorem of Deligne-Mumford implies  $\mathcal{M}_g$  is an algebraic variety of dimension  $3g - 3$  whose canonical compactification  $\bar{\mathcal{M}}_g$  is a projective variety. I will discuss this theorem, and describe an approach using hyperbolic geometry.

**Monday, 18 April 2016, 4pm**

**Smith Hall 204**