

Math 7853 - Fall 2008
The Weil-Petersson metric on Teichmüller and moduli space

This course will be an introduction to the Weil-Petersson metric on Teichmüller space and moduli space. Here are some of the topics we may cover:

- the hyperbolic plane, models and isometries;
- quasi-conformal maps;
- definitions of Teichmüller space and moduli space;
- quadratic differentials;
- the measurable Riemann mapping theorem;
- definition of the Weil-Petersson metric;
- incompleteness of the WP-metric and its metric completion (this is another way of getting the Deligne-Mumford compactification of moduli space);
- curvature of WP

The beginning of the course will be elementary and accessible to anyone who has taken 6210-20 and 6510-20.