## FINAL PROJECT TOPICS SPRING 2017

## INSTRUCTOR: YI LIU

\* In the following there is a list of suggested topics relevant to our course. Select one of your favorite topics and complete a background search on it. (If your topic is not from the list, you should let me know in advance.) You may focus on one of the following aspects:

- How was the result discovered?
- What directions of research did the result lead to?
- What is the current status regarding the development of the result?

At the end of the course, you will be asked to submit a survey article on your chosen topic and give a 20-minute presentation on class.

List of suggested topics:

- hyperbolic Dehn filling
- hyperbolic 3-manifold of the smallest volume
- Mostow rigidity
- Margulis Lemma
- quasi-Fuchsian groups and quasi-conformal mapping
- computation of hyperbolic volume