We will discuss the basic theory of Lie groups and their relation with Lie algebras (the three fundamental theorems of Lie theory). An emphasis will be made on examples of Lie groups, such as classical matrix groups. In the second half of the course we will talk about compact Lie groups and reductive complex Lie groups.

The book for the course is
A. Kirillov Jr., Introduction to Lie groups and Lie algebras.
I also recommend David Vogan’s website for 18.755 as a good source for this course.

To officially pass the course, it will be required to solve homework assignments which will be assigned on Stellar on Thursdays and due the following Thursday. The first homework will be assigned on Sept 7.