MATH 231A: 10 LECTURE REFERENCES

1. **Maximum Principle**
   - The maximum principle is one of the central themes in elliptic PDE, and some version of it is presented in almost every text. For a detailed discussion of such estimates read Chapter 2 of [3], Chapter 3 of [2] and Chapter 2 of Jost’s book (on reserve in the library).

   - One of the most important things about the maximum principle is that it adapts itself well to scalar non-linear problems, as well as to some classes of non-linear systems. It is often the first key step in showing existence for non-linear equations. See Chapter 11, and in particular Section 11.3 of [2] for more.

2. **Continuity Lemma and General Existence Theory**
   - The most basic and classical application of Schauder estimates is the one given in class and in the notes on the existence of $C^{2,\alpha}$ solutions of general elliptic equations with non-positive $c(x)$ coefficient. This material is explained in Section 6.3 of [2], Chapter 6 of [4], and Chapter 11 of Jost’s book (on reserve in the library).

**References**


