

### **Schwarz's Lemma**

In complex analysis there is a famous fact known as the Maximum Modulus Principle. I will introduce an important consequence known as Schwarz's lemma. I will then introduce a complete characterization of certain automorphisms on the unit open disk. That will open the way for a generalization of the lemma and other theorems to any Banach space. Students should benefit from an exposure to the topic and therefore are highly encouraged to participate.