Thesis structure: title?

1. Introduction
   - ?

2. Framework for analytical model
   - Theory of superconductivity (short?)
   - Andreev reflection, SN interface
   - Theory of SNS junctions
   - Foundations of the quasiclassical model

3. Results of analytical model
   - Critical current for SNS junctions
   - Critical current for SNS with QPC
   - Critical current for SNS with QPC and edge contribution

4. Framework for numerical model
   - (Experimental setup ?)
   - Tight binding model of bilayer graphene
   - Random matrix theory for transport

5. Results of numerical model
   - QPC:
     - Conductance and critical current calculation
     - Effect of disorder
     - Effect of rough edges
     - Effect of finite doping in leads ?
     - Current density in sample ?
     - Zigzag vs Armchair

   - Waveguide setup
     - Same as above?
     - Current density form Fourier transformation

6. Conclusion
   - ?