**Chapter 3**

**Verification**

* 1. **Verification Concept** 
     1. Past research on verification
     2. How it detects error
  2. **Topic of interest: variable density transport equations**
     1. Explain layout: spatial accuracy, temporal accuracy
        1. Layout
           1. Consistency
           2. Order of accuracy studies
           3. MES
  3. **Accuracy cases:**
     1. Spatial accuracy
        1. 1D mixing case – comparison to exact (z, v, rho)
        2. 2D poiseuille case variable density – comparison to exact
     2. Temporal accuracy
        1. Time periodic poiseuille case – comparison to exact
        2. Stoke’s 2nd problem
  4. **Boundary layer cases:** 
     1. Forced convection: Blasius with heat transfer
     2. Natural convection: Ostrach