**Title: Search of saturation physics at future Electron-Ion Collider (EIC) with dihadron correlation measurements**

**Outline:**

**Chpt 1. QCD, factorization, PDF, evolution**

**Chpt2. Saturation physics**

**Chpt3. Search of saturation signature in current experiments**

                DIS, RHIC/LHC, pA/dAu studies,  initial state for AA

**Chpt4. Saturation studies to be performed at EIC**

                EIC project machine, detector, model detector, eSTAR/ePHENIX

                eA project at EIC

                        Definitions of DIS variables.

                        by topics: nPDF, saturation, final state energy loss, nuclear imaging

                        by measurements: nuclear F2/FL, diffractive, dihadron, ReA

**Chpt5. Monte Carlo generator development**

**Chpt6. Determination of collision geometry in eA**

**Chpt7. Dihadron correlation measurements as a method to study saturation**

                Dihadron in saturation formalism

                Simulations of dihadron correlation

                Monte Carlo generator setup

                Detector effect estimation

**Chpt8. Summary**