

QCD:

- Basics and Lagrangian
- Color and Feynman Rules
- Renormalization and running coupling
- QCD at work: $e^+e^- \rightarrow$ hadrons
- Infrared safety
- Scale dependence
- DIS and the parton model
- Altarelli-Parisi Equations and evolution
- Parton distributions
- QCD at hadronic colliders
- Higher order QCD corrections : how-to and state of the art
- Large Logarithmic corrections and resummation
- Drell-Yan, Jet and Higgs production

Bibliography:

- QCD and Collider Physics - R.K. Ellis, B. Webber, W.J. Stirling
- Quantum Field Theory - G. Sterman
- Quantum Field Theory - M. Peskin, D. Schroeder
- Perturbative QCD - R. Field
- Foundations of QCD - T. Muta
- Many Lectures on QCD available on the web!