CHERN-SIMONS THEORY AND ITS APPLICATIONS

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In this three hour lectures on 'Chern-Simons Theory and Its Applications', I will first introduce some basic features of the Chern-Simons theory and then cover some salient applications. Here is a back-bone or synopsis of the lectures.

(1) Abelian gauge theory with Maxwell and/or Chern-Simons term in 2+1 space time.
(2) Matter-gauge interaction and charge-flux composite
(3) Fractional spin and statistics
(4) Condensed matter and other applications