



Contribution ID: 113

Type: **Talk**

Recent progress in understanding deconfinement and chiral symmetry breaking transitions

Saturday 4 June 2016 11:00 (30 minutes)

While the crucial role of gauge topology was recognized from 1970's, confinement was associated with monopoles and chiral symmetry breaking with instantons. Recognizing presence of non-zero holonomy, van Baal and others discovered splitting of the instantons into their constituents —the instanton-dyons. Several groups now work out properties of their ensembles, which generate both the deconfinement and chiral phase transitions in QCD-like theories. Introducing variable phases for quark periodicity conditions —known as flavor holonomies —one can switch fermion coupling to different dyons, and thus dramatically change both the order and temperature of both transitions. First lattice studies of modified —so called Z_N -symmetric QCD —have also found these effects.

Author: SHURYAK, Edward (Stony Brook University)

Presenter: SHURYAK, Edward (Stony Brook University)

Session Classification: Plenary session