

# Gauge Topology 3: from Lattice to Colliders

ECT\* workshop program, 28 May –01 June 2018

## Monday

08:40–09:05 **Registration**

09:05–09:20 **Welcome Address**

SESSION 40+10mins

09:20–10:10 Confinement criteria and the Higgs Mechanism

Speaker: Jeff Greensite

10:10–11:00 Topology and Chiral Symmetry Breaking at Nonzero theta angle

Speaker: Jacobus Verbaarschot

11:00–11:40 **Coffee**

11:40–12:30 Adiabatic continuity and spectral conspiracy in adjoint QCD

Speaker: Mikhail Shifman

12:30–14:30 **Lunch**

14:30–15:20 Gluon propagator and vertex from lattice QCD: a path to the instanton liquid parameters?

Speaker: Feliciano de Soto

15:20–16:00 **Coffee**

16:00–16:50 Topological Charge in Lattice QCD and the Chiral Condensate

Speaker: A. Athenodorou

16:50–17:30 **Free Discussion**

## Tuesday

SESSION 40+10mins

09:20–10:10 Monopoles and instantons dyons

Speaker: Edward Shuryak

10:10–11:00 Recent Progress in Understanding the Role of Monopoles in QCD

Speaker: Adith Ramamurti

11:00–11:40 **Coffee**

11:40–12:30 Topological susceptibility in QCD at high temperature: a status report

Speaker: Claudio Bonati

12:30–14:30 **Lunch**

14:30–15:20 UA(1) breaking from the lattice and its topological origin

Speaker: Sharma Sayantan

15:20–16:00 **Coffee**

16:00–16:50 Topology in hot QCD with four quark flavours

Speaker: M.P. Lombardo

16:50–17:30 **Free Discussion**

## Wednesday

SESSION 40+10mins

- 09:20–10:10 Resurgence, Large N and Phase Transitions Speaker: Gerald Dunne  
10:10–11:00 Topological properties of  $CP^{(N-1)}$  models in the large-N limit Speaker: Claudio Bonanno  
11:00–11:40 **Coffee**  
11:40–12:30 A scalar  $SO(3)$ -theory and its topological excitations Speaker: Manfred Faber  
12:30–14:30 **Lunch**

## Thursday

SESSION 40+10mins

- 09:20–10:10 Recent Results on the confining string in Lattice Gauge Theories Speaker: Michele Caselle  
10:10–11:00 Baryon bags in lattice QCD Speaker: Christof Gattringer  
11:00–11:40 **Coffee**  
11:40–12:30 The chiralspin symmetry of confinement and its implications for QCD Speaker: Leonid Glozman  
12:30–14:30 **Lunch**  
14:30–15:20 Topological Properties of  $SU(3)$  Yang Mills Theory With Double Trace Deformation Speaker: Marco Cardinali  
15:20–16:00 **Coffee**  
16:00–16:40 Lattice calculation of sphaleron diffusion rate in gluodynamics Speaker: Andrey Kotov  
16:40–17:20 **Free Discussion**

## Friday

SESSION 40+10mins

- 09:20–10:10 Gauge Theory, Topology and Geometry Speaker: Kishore Marathe  
10:10–11:00 Nonequilibrium axial charge production in expanding Glasma flux tubes Speaker: Naoto Tanji  
11:00–11:40 **Coffee**  
11:40–12:20 **Discussion & Close**  
12:20–14:00 **Lunch**