RIKEN BNL Research Center

Workshop on Gauge-Invariant Variables in Gauge Theories
May 25–29, 1999
Physics Department - Room 2-160
Organizers:
Pierre Van Baal, Peter Orland and Rob Pisarski

AGENDA

Tuesday 25 May

Morning

9:00		Registration - Rm. 2-160
9:45		Opening Remarks
10:00	I. Kogan	*Gauge Fields and AdS/CFT* (45 min.)
10:45		Coffee
11:00	V.P. Nair	$2+1$ *Yang-Mills Theory* (45 min.)
11:45		Lunch

Afternoon

13:30	W. Brown	*Instantons and the QCD Vacuum Wave Functional* (30 min.)
14:00		Coffee
14:30		*Panel Discussion - The Variational Principle in QCD -* W. Brown, I. Kogan, E. Moreno, P. Orland (chair) (1 = hr.)
15:30		Rest for all jet-lagged participants

Wednesday 26 May

Morning

9:15	D. Zwanziger	*A Confinement Scenario in the Coulomb Gauge* (45 min.)
10:00	P. Orland	*Potential Topography on Orbit Space* (45 = min.)
10:45		Coffee
11:00	K. Fujikawa	*The Gribov Problem and BRST Formalism* (45 min.)
11:45		Lunch

Afternoon

13:30	M. Schaden	*Resolution of the Gribov Problem* (30 = min.)
14:00	K. Haller	*Dynamics and Topology in a Gauge-Invariant Formulation of QCD* (30 min.)
14:30		Coffee
15:00	E. Bagan	*Gauge-Invariant Charged Variables* (30 = min.)
15:30		Panel Discussion - *What Do We Really Know About Orbit Space?* - J. Fuchs (chair), V.P. Nair, P. van Baal, D. Zwanziger (1 hr.)

Thursday 27 May

Morning

9:15		Seven (multiplexed) ten minute talks*, plus poster for = each speaker (including extra time for switching speakers) (1 hr. 45 min.)
11:00		Coffee
11:15	Y. Hosotani	*Solitons in Einstein-Yang-Mills Theory in Asymptotically Anti-de Sitter Space Time* (45 min.)
12:00		Lunch

Afternoon

13:30	A. Jevicki	*Gravity as a Collective Phenomenon from Gauge Theories* (45 min.)
14:15		Coffee
14:45	P. van Baal	*Gauge-Invariant Monopoles for Free* (45 min.)
15:30	O. Philipsen	*Non-Perturbative Physical Properties of 3D Gauge Theories* (45 min.)
		(No Panel Discussion)

Friday 28 May

Morning

9:15	M. Ogilvie	*Lattice Gauge Fixing, Elitzur's Theorem and Abelian Projection* (45 min.)
10:00	J. Hetrick	*Smeared Lattice Gauge Fixing* (45 min.) =
10:45		Coffee
11:00	M. Testa	*Lattice Gauge Fixing, Gribov Copies and BRST Symmetry* (45 min.)
11:45		Lunch

Afternoon

13:30	M. Golterman	*Gauge-Fixing Approach to Lattice Chiral Gauge Theories* (45 min.)
14:15		Coffee
14:45		Panel Discussion - *What Lattice Simulations Imply for Analytic Approaches* - M. Golterman, M. Ogilvie, O. Philipsen, M. Testa (chair) (1 hr.)
15:45		Closing remarks - Conclusion of the workshop (15 min.)

*Thursday Morning 10 Minute Talks

G. Alexanian	*Renormalization of the Metric on Configuration Space*
J. Bjoraker	*New Particle-Like Dyon Solutions to the SU(2) Einstein-Yang-Mills Equations in Asymptotically Anti-de Sitter Space*
R. Ray	*Goldstone Bosons and Hard Thermal Loops*
A. Cucchieri	*Numerical Study of the Gluon Propagator in Landau and Coulomb Gauge*
G. Gabadadze	*Field/String theory Approach to Theta = Dependence in Large-N Yang-Mills Theory*
R. Khuri	*Wu-Yang Ambiguities*
S. Tanimura	*Reduction of Quantum Systems on Riemannian Manifolds with Symmetry and Application to Molecular Mechanics*