
Program
Tenth Workshop on Non-Perturbative QCD
l'Institut d'Astrophysique de Paris - Paris, France
8-12 June 2009

Program

June 8, Monday (morning)

8:30a.m. Registration -
9:25 Welcoming Remarks by Chung-I Tan

Lattice QCD and Hadron Structure

9:30 a.m. **Session Chair: K. Orginos**
9:30 K. Orginos: "*Charmed and Bottom Hadron Physics from Lattice QCD*"
9:55 W. Detmold: "*Many Body Lattice QCD*"

10:20 **Refreshments**

10:50 P. DeForcrand: "*Nuclear Physics from Lattice QCD at Strong Coupling*"
11:15 B. Tiburzi: "*Lattice QCD in Background Fields*"
11:40 A. Di Giacomo: "*Confinement of Color and Geometry*"
12:05 H. Hansen: "*The QCD Critical Behavior in the PNJL Model*"

12:30 p.m. **Lunch**

June 8, Monday (afternoon)

Non-perturbative Methods for Gauge Theories

2:00 p.m. **Session Chair: M. Unsal**
2:00 M. Unsal: "*Confinement, Conformal Window and Deformed Yang-Mills Theories*"
2:30 E. Poppitz: "*Chiral Gauge Dynamics and Dynamical Supersymmetry Breaking*"
3:00 A. Gonzalez-Arroyo: "*From Confinement to Adjoint Zero-Modes*"

3:30 **Refreshments**

4:00 G. Fleming: "*Lattice Strong Dynamics at TeV Scale*"
4:30 C. Pica: "*Technicolor on the Lattice*"
4:55 K. Tuominen: "*Lattice Studies of $SU(2)$ Gauge Theory with Two Adjoint Flavors*"
5:20 R. Babich: "*How Strange is Nucleon?*"
5:45 D. Basirevic: "*LQCD calculations of CKM Matrix Elements*"
6:10 Session ends

June 9, Tuesday (morning)

Strings and Amplitudes

- 9:00 a.m.** **Session Chair: A. Jevicki**
9:00 P. Heslop: “*The Wilson Loop/Amplitude Duality*”
9:30 E. Sokatchev: “*Scattering Amplitudes, Wilson Loops
and Their Symmetries*”
10:00 G. Travaglini: “*One-loop Amplitude in $N=4$ Super Yang-Mills
and Dual (Super) Conformal Symmetry*”
- 10:30** **Refreshments**
- 11:00 A. Jevicki: “*Moduli Space of AdS Strings*”
11:30 C. Vergu: “*Scattering Amplitudes for $\mathcal{N} = 4$ SYM and AdS/CFT*”
12:00 J. C. Lee: “*Kummer Function and High Energy String Scattering Amplitudes*”
- 12:30 p.m** **Lunch**

June 9, Tuesday (afternoon)

From LHC to Cosmic Ray

- 2:00 p.m.** **Session Chair: T. Gaisser**
2:00 D. D’Enterria: “*Prospects for Higgs and New Physics Measurements
with Forward Protons at LHC*”
2:30 G. Pancheri: “*Total Cross-sections at Very High Energy: from Protons to Photons*”
3:00 R. Ulrich: “*Hadronic production cross section from cosmic ray experiments*”
- 3:30** **Refreshments**
- 4:00 K. Werner: “*How Air Shower and Heavy Ion Physics Benefit from Each Other*”
4:30 T. Gaisser: “*Hadronic Interactions and Production of High-Energy
Muons and Neutrinos*”

Astrophysics and Cosmology

- 5:00 p.m.** **Session Chair: J. Martin**
5:00 S. Prunet: “*The Planck Experiment*”
5:30 M. Lemoine: “*Moduli Cosmology at the perturbative Level*”
6:00 Session ends

June 10, Wednesday (morning)

QCD String and High Energy Collisions

9:00 a.m.	Session Chair: R. Brower
9:00	R. Brower: “ <i>Introduction to BPST Pomeron and Higgs Production</i> ”
9:30	N. Mann: “ <i>Pomeron Contribution to pp and $p\bar{p}$ Scattering in AdS/QCD</i> ”
10:00	S. Brodsky: “ <i>Light-Front Holography and Non-Perturbative QCD</i> ”
10:30	Refreshments
11:00	C-I Tan: “ <i>Pomeron and Odderon: Saturation, Confinement and AdS/CFT</i> ”
11:30	I. Balitsky: “ <i>High-Energy Amplitudes in $\mathcal{N} = 4$ SYM in the Next-to-Leading Order</i> ”
12:00	F. Hautmann: “ <i>Multi-particle Production from Unintegrated Parton Distributions</i> ”
12:30 pm	Lunch

June 10, Wednesday (afternoon)

HE Scattering and QFT

2:00 p.m.	Session Chair: C-I Tan
2:00	L. Szymanowski: “ <i>Recent Advances in Hard Exclusive Reactions</i> ”
2:25	S. Wallon: “ <i>Diffraction processes and non-perturbative matrix elements beyond leading twist: ρ_T-meson production</i> ”
2:50	A. Pineda: “ <i>Breakdown of the Operator Product Expansion in the t' Hooft Model</i> ”
3:15	D. Sivers: “ <i>A Field-Strength Description of a Rapidly Expanding Non-Abelian Flux Tube</i> ”
3:45	C. Bender: “ <i>Latest Results on PT Symmetry</i> ”
4:15	Session ends

Wednesday Evening

7:30	Banquet at New Village Tao Tao
	Tribute to Herb Fried
	Thomas Gaisser, Hing Tong Cho, Kewang-Sup Soh

June 11, Thursday (morning)

Hard Probes and AdS/CFT

9:00 a.m.	Session Chair: E. Iancu
9:00	R. Peschanski: “ <i>Boost-Invariant Dynamics from AdS/CFT</i> ”
9:30	E. Iancu: “ <i>Partons and Jets in Strongly Coupled Plasmas from AdS/CFT</i> ”
10:00	Refreshments
10:30	J. Casalderrey Solana: “ <i>Heavy Probes in Strongly Couple Plasmas and Strings Fluctuations</i> ”
11:00	M. Shigemori: “ <i>Brownian Motion in AdS/CFT</i> ”
11:30	G. Beuf: “ <i>Gravity Dual of $\mathcal{N} = 4$ SYM Theory with Fast Moving Sources</i> ”
12:00 pm	Lunch

June 11, Thursday (afternoon)

Strong Fields and the Vacuum

1:30 p.m.	Session Chair: J. Rafelski
1:30	G. Mourou: “ <i>Extreme Light Physics and Applications</i> ”
2:10	A. DiPiazza: “ <i>Refractive QED Effects in Strong Laser Fields</i> ”
2:40	L. Labun: “ <i>Modified Vacuum Energy in Strong QED Fields</i> ”
3:00	M. Ruf: “ <i>Lepton Pair Production in Intense Laser Fields</i> ”
3:20	C. Klier: “ <i>QED Vacuum Decay Phenomena Induced by Light Pulse-Matter Interaction</i> ”
3:40	Refreshments
4:10	T. Cohen: “ <i>The QCD Vacuum in External Static Electric and Magnetic Field</i> ”
4:40	M. Chernodub: “ <i>Quenched Lattice QCD in Strong Magnetic Field: Chiral Condensate, Magnetization and Chiral Magnetic Effect</i> ”
5:10	A. Zayakin: “ <i>Wilson Loops and Field Correlators from Dyson-Schwinger Equations</i> ”
5:40	J. Rafelski: “ <i>Challenges of Strong Field in QCD Research</i> ”
6:10	Session ends

June 12, Friday (morning)

Heavy Ion Physics from RHIC to LHC

9:00 a.m.	Session Chair: B. Mueller
9:00	B. Mueller: “ <i>What Does a Quark-Gluon Plasma Sound Like?</i> ”
9:30	T. Lappi: “ <i>Saturation at RHIC and LHC</i> ”
10:00	Refreshments
10:30	R. Snellings: “ <i>The Nearly Perfect Fluid at RHIC</i> ”
11:00	H. Warringa: “ <i>Implications of Topological Charge Fluctuations on Heavy Ion Collisions</i> ”
11:30	R. Hwa: “ <i>Probing Dense Medium by Dijets</i> ”
12:00 pm	Lunch

June 12, Friday (afternoon)

Analytic, Non-Perturbative QFT

1:30 p.m.	Session Chair: H. Fried
1:30	J. W. Moffat: “ <i>Redesigning Electroweak Theory: Does the Higgs Particle Exist?</i> ”
2:00	J. Rubin: “When Quantum Mechanics Complies with Bell’s Inequalities”
2:30	M. Giordano: “ <i>A Nonperturbative Foundation of the Euclidean-Minkowskian Duality of Wilson-loop Correlation Functions</i> ”
3:00	Y-M Sheu: “ <i>Ghost Magic - MGI, MLC & Gluonless QCD Under Eikonal Approximations</i> ”
3:30	H. M. Fried: “ <i>ANPAEQED II: A Mechanism for Finite Charge Renormalization in QED</i> ”
4:00	Berndt Mueller: “ End of Workshop ”