

CONTENTS

1. High-Order Calculations in QCD and in General Gauge Theories	1
NLO Evolution of Color Dipoles	3
<i>I. Balitsky</i>	
Recent Perturbative Results on Heavy Quark Decays	15
<i>J.H. Piclum, M. Dowling, A. Pak</i>	
Leading and Non-Leading Singularities in Gauge Theory Hard Scattering	27
<i>G. Sterman</i>	
The Space-Cone Gauge, Lorentz Invariance and On-Shell Recursion for One-Loop Yang-Mills Amplitudes	41
<i>D. Vaman, Y.-P. Yao</i>	
2. Heavy Flavor Physics	57
Exotic $c\bar{c}$ Mesons	59
<i>E. Braaten</i>	
Search for New Physics in B_s -Mixing	70
<i>A.J. Lenz</i>	
Implications of $D^0 - \bar{D}^0$ Mixing for New Physics	79
<i>A.A. Petrov</i>	
Precise Determinations of the Charm Quark Mass	90
<i>M. Steinhauser</i>	

3. Quark-Gluon Dynamics at High Density and/or High Temperature	99
Crystalline Condensate in the Chiral Gross-Neveu Model <i>G. V. Dunne, G. Başar</i>	101
The Strong Coupling Constant at Low and High Energies <i>J.H. Kühn</i>	114
Quarkyonic Matter and the Phase Diagram of QCD <i>L. McLerran</i>	125
Statistical QCD with Non-Positive Measure <i>J.C. Osborn, K. Splittorff, J.J.M. Verbaarschot</i>	135
From Equilibrium to Transport Properties of Strongly Correlated Fermi Liquids <i>T. Schäfer</i>	148
Lessons from Random Matrix Theory for QCD at Finite Density <i>K. Splittorff, J.J.M. Verbaarschot</i>	160
4. Methods and Models of Holographic Correspondence	175
Soft-Wall Dynamics in AdS/QCD <i>B. Batell</i>	177
Holographic QCD <i>N. Evans, E. Threlfall</i>	184
QCD Glueball Sum Rules and Vacuum Topology <i>H. Forkel</i>	196
The Pion Form Factor in AdS/QCD <i>H.J. Kwee, R.F. Lebed</i>	203
The Fast Life of Holographic Mesons <i>R.C. Myers, A. Sinha</i>	215

Properties of Baryons from D-branes and Instantons <i>S. Sugimoto</i>	227
The Master Space of $\mathcal{N} = 1$ Quiver Gauge Theories: Counting BPS Operators <i>A. Zaffaroni</i>	240
5. Topological Field Congurations	253
Skyrmions in Theories with Massless Adjoint Quarks <i>R. Auzzi</i>	255
Domain Walls, Localization and Confinement: What Binds Strings Inside Walls <i>S. Bolognesi</i>	267
Static Interactions of non-Abelian Vortices <i>M. Eto</i>	279
Vortices which do not Abelianize Dynamically: Semi-Classical Origin of Non-Abelian Monopoles <i>K. Konishi</i>	291
A Generalized Construction for Lumps and Non-Abelian Vortices <i>W. Vinci</i>	303
6. Dynamics in Supersymmetric Theories	315
Cusp Anomalous Dimension in Planar Maximally Supersymmetric Yang-Mills Theory <i>B. Basso</i>	317
$SO(2M)$ and $USp(2M)$ (Hyper)Kähler Quotients and Lumps <i>S.B. Gudnason</i>	329

7. Other Developments	341
Glueballs Condensing at the CCNI: 4096 CPUs Weigh In <i>J. Giedt, R. Brower, S. Catterall, G.T. Fleming, P. Vranas</i>	343
Baryon Regge Trajectories and the $1/N_c$ Expansion <i>J.L. Goity, N. Matagne</i>	351
Infrared Behavior of the Fermion Propagator in Unquenched QED ₃ with Finite Threshold Effects <i>Y. Hoshino</i>	361
Gauge Fields in Accelerated Frames <i>F. Lenz</i>	373
QCD at Complex Coupling, Large Order in Perturbation Theory and the Gluon Condensate <i>Y. Meurice</i>	386
511 KeV Line and Other Diffuse Emissions as a Trace of the Dark Matter <i>A.R. Zhitnitsky</i>	398
8. Glimpses of the Conference	411
Pictures	413
List of Participants	433