

QCD: The Modern View of the Strong Interactions

Monday 05 October 2009 - Friday 09 October 2009

**Berlin-Brandenburgische Akademie der Wissenschaften
Programme**

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Monday 05 October 2009

Monday morning session - Einstein-Hall (09:00-13:00)

time	[id] title	presenter
09:00	[0] Opening	
09:10	[1] QCD: 37 years later	GROSS, D.
10:00	[2] Parton distribution functions to $O(\alpha_s^3)$	STIRLING, J.
10:50	Coffee break	
11:20	[3] Heavy flavor contributions in DIS to $O(\alpha_s^3)$	KLEIN, S.
12:10	[4] Monte Carlo simulation of pp-processes	FRIXIONE, S.

Lunch - Terrace (13:00-14:30)

Monday afternoon session - Einstein-Hall (14:30-18:00)

time	[id] title	presenter
14:30	[5] Spin-dependent parton distributions of the nucleon	VOGELSANG, W.
15:20	[6] On the interface between lattice results and chiral perturbation theory	LEUTWYLER, H.
16:10	Coffee break	
16:40	[7] Experimental status of the precision of α_s	BETHKE, S.
17:10	[8] Hilbert space in deterministic theories	T' HOOFT, G.

Tuesday 06 October 2009

Tuesday morning session - Einstein-Hall (09:00-13:10)

time	[id] title	presenter
09:00	[11] Physics at the LHC	HEUER, R.
09:50	[50] Nucleon Structure from Lattice QCD	SCHIERHOLZ, G.
10:40	Coffee break	
11:10	[13] Periods, Feynman integrals and number theory	BROWN, F.
12:00	[46] Hopf algebras and renormalization	KREIMER, D.

Lunch - Einstein-Hall (13:10-14:30)

Tuesday afternoon session - Einstein-Hall (14:30-18:00)

time	[id] title	presenter
14:30	[14] Integrability and exact anomalous dimensions in Yang-Mills theory	STAUDACHER, M.
15:00	[15] Gauge/gravity duality and QCD observables	ERDMENGER, J.
15:30	[16] Pomeron and the AdS/CFT correspondence	BARTELS, J.
16:00	Coffee break	
16:30	[17] New global analysis of parton distributions: exploring the large-x domain	MELNITCHOUK., W.
17:00	[18] Cutting methods and MHV	GLOVER, N.

Evening talk - Leibniz-Hall (20:00-21:00)

time	[id] title	presenter
20:00	[47] Challenges at Particle Accelerators: Past, Present, and Future	VELTMAN, M.

Wednesday 07 October 2009

Wednesday morning session - Einstein-Hall (09:00-13:00)

time	[id] title	presenter
09:00	[19] Large-scale computer algebra calculations of Feynman diagrams	VERMASEREN, J.
09:50	[20] Modern summation technologies in computer algebra	SCHNEIDER, C.
10:40	Coffee break	
11:10	[21] Precise charm and bottom quark masses	KÜHN, J.
11:40	[48] R(s), DIS sum rules and the Crewther Relation in order α_s^4	CHETYRKIN, K.
12:10	[22] Top quark production at the LHC in higher orders	MOCH, S.-O.

Lunch - Terrace (13:00-14:30)

Wednesday afternoon session - Einstein-Hall (14:30-18:00)

time	[id] title	presenter
14:30	[23] The three-loop static potential in QCD	STEINHAUSER, M.
15:00	[24] Mass effects at higher orders of QCD	CZAKON, M.
15:30	[25] Top quark pair production in association with an additional jet: Phenomenological results at next-to-leading order QCD	UWER, P.
16:00	Coffee break	
16:30	[27] Computations of one-loop amplitudes with massive particles	BADGER, S.
17:00	[28] Fluid dynamics from AdS/CFT	HAACK, M.
17:30	[29] String theory meets collider physics	STIEBERGER, S.

Thursday 08 October 2009

Thursday morning session - Einstein-Hall (09:00-13:00)

time	[id] title	presenter
09:00	[30] Harmony of Scattering Amplitudes: From QCD to Gravity	BERN, Z.
09:50	[31] How on-shell methods simplify QCD loop computations at LHC	DIXON, L.
10:40	Coffee break	
11:10	[32] NNLO corrections to $e^+e^- \rightarrow 3$ jets	GEHRMANN, T.
12:00	[33] Effective field theory tools for collider physics	NEUBERT, M.

Lunch - Terrace (13:00-14:30)

Thursday afternoon session - Einstein-Hall (14:30-22:30)

time	[id] title	presenter
14:30	[35] Hadrons in modern constituent quark models	PLESSAS, W.
15:15	[36] Path integral approach to soft exponentiation	WHITE, C.
15:45	[37] Conformal symmetry at TeV scales	APPELQUIST, T.
16:15	Coffee break	
16:45	[38] Manufacturing one-loop matrix elements with GOLEM	REITER, T.
17:15	[39] Two-loop QCD corrections to B meson decay	HUBER, T.
17:45	[40] Light-front holography and non-perturbative QCD	BRODSKY, S.
19:30	[49] Conference Dinner	

Friday 09 October 2009

Friday morning session - Einstein-Hall (08:00-13:30)

time	[id] title	presenter
08:30	[43] Some insights from studies of variants of the standard model	SHROCK, R.
09:00	[41] Gauge boson binaries amidst gluonic mesons, a QCD odyssey	MINKOWSKI, P.
09:30	[42] Non-perturbative heavy quark effective theory	SOMMER, R.
10:20	[52] Lattice QCD with Wilson twisted fermions	ROSSI, G.
10:50	Coffee break	
11:20	[44] Quark-gluon plasma	SHURYAK, E.
12:10	[45] Gauge dynamics at strong coupling from supersymmetry	SHIFMAN, M.

