

50 Years of Quantum Chromodynamics

Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome and Introduction

Monday 11 September 2023 08:40 (20 minutes)

Presenters: BERN, Zvi (University of California Los Angeles (US)); Prof. KANG, Zhongbo

Session Classification: Monday

Contribution ID: 2

Type: **not specified**

Real Virtuality and Avatars of Doom

Monday 11 September 2023 09:00 (50 minutes)

Presenter: Prof. WILCZEK, Frank (MIT)

Session Classification: Monday

Contribution ID: 3

Type: **not specified**

QCD beyond diagrams

Monday 11 September 2023 09:50 (50 minutes)

Presenter: CREUTZ, Michael (Brookhaven Lab)

Session Classification: Monday

Contribution ID: 4

Type: **not specified**

The Mechanism of Quark Confinement

Monday 11 September 2023 11:10 (50 minutes)

Presenter: Prof. SUSSKIND, Leonard (Stanford)

Session Classification: Monday

Contribution ID: 5

Type: **not specified**

Flying Penguins and Other Recollections on QCD history

Monday 11 September 2023 14:00 (50 minutes)

Presenter: VAINSHTEIN, Arkady (University of Minnesota)

Session Classification: Monday

Contribution ID: 6

Type: **not specified**

Prelude to the QCD Revolution

Monday 11 September 2023 14:50 (50 minutes)

Presenter: JAFFE, Robert (MIT)

Session Classification: Monday

Contribution ID: 7

Type: **not specified**

The role of lattice QCD in precision physics

Monday 11 September 2023 16:10 (50 minutes)

Presenter: EL-KHADRA, Aida

Session Classification: Monday

Contribution ID: 8

Type: **not specified**

QCD, the theory of hadrons: then and now

Monday 11 September 2023 17:00 (50 minutes)

Presenter: Prof. SHIFMAN, Mikhail (University of Minnesota)

Session Classification: Monday

Contribution ID: 9

Type: **not specified**

QCD and I: a long and complex relation

Tuesday 12 September 2023 09:00 (50 minutes)

Presenter: VENEZIANO, Gabriele

Session Classification: Tuesday

Contribution ID: **10**

Type: **not specified**

QCD, chirality, and topological insulators

Tuesday 12 September 2023 09:50 (50 minutes)

Presenter: KAPLAN, David

Session Classification: Tuesday

Contribution ID: **11**

Type: **not specified**

The role of Event Generators (in the exploration of QCD)

Tuesday 12 September 2023 11:10 (50 minutes)

Presenter: SJOSTRAND, Torbjorn (Lund University (SE))

Session Classification: Tuesday

Contribution ID: 12

Type: **not specified**

Seeing quarks and gluons: following QCD from initial to final states

Tuesday 12 September 2023 14:00 (50 minutes)

Presenter: STERMAN, George

Session Classification: Tuesday

Contribution ID: 13

Type: **not specified**

50+ years of lepton pair production

Tuesday 12 September 2023 14:50 (50 minutes)

Presenter: ELLIS, Richard Keith (University of Durham (GB))

Session Classification: Tuesday

Contribution ID: 14

Type: **not specified**

Confinement and Dimensional Transmutation

Tuesday 12 September 2023 16:10 (50 minutes)

Presenter: KLEBANOV, Igor (Princeton University)

Session Classification: Tuesday

Contribution ID: 16

Type: **not specified**

Bhaumik Public Lecture: Fifty Years of Quantum Chromodynamics (The Theory of The Strong Nuclear Force)

Tuesday 12 September 2023 18:00 (1h 30m)

Quantum Chromodynamics is fifty years old this year. I shall discuss the past, present and future of this remarkable theory.

Presenter: GROSS, David (KITP/UCSB)

Session Classification: Public Lecture

Contribution ID: 17

Type: **not specified**

Effective Field Theories of QCD

Wednesday 13 September 2023 09:00 (50 minutes)

Presenter: Prof. STEWART, Iain

Session Classification: Wednesday

Contribution ID: **18**

Type: **not specified**

Classical lumps and their quantum descendants in QCD's Regge limit

Wednesday 13 September 2023 09:50 (50 minutes)

Presenter: VENUGOPALAN, Raju

Session Classification: Wednesday

Contribution ID: 19

Type: **not specified**

The evolution of the precision program: from QCD to SMEFT

Wednesday 13 September 2023 11:10 (50 minutes)

Presenter: BOUGHEZAL, Radja

Session Classification: Wednesday

Contribution ID: 20

Type: **not specified**

Constraints on QCD Dynamics from Symmetries and Anomalies

Wednesday 13 September 2023 14:00 (50 minutes)

Presenter: Prof. KOMARGODSKI, Zohar (Stony Brook University)

Session Classification: Wednesday

Contribution ID: 21

Type: **not specified**

Higgs-Confinement Phase Transitions in QCD

Wednesday 13 September 2023 14:50 (50 minutes)

Presenter: DUMITRESCU, THOMAS

Session Classification: Wednesday

Contribution ID: 22

Type: **not specified**

Experimental QCD

Wednesday 13 September 2023 16:10 (50 minutes)

Presenter: JACAK, Barbara (University of California Berkeley (US))

Session Classification: Wednesday

Contribution ID: 23

Type: **not specified**

Two amuse bouche to celebrate the birth of QCD

Wednesday 13 September 2023 17:00 (50 minutes)

Presenter: PISARSKI, Robert

Session Classification: Wednesday

Contribution ID: 24

Type: **not specified**

Integrability of high-energy QCD

Thursday 14 September 2023 09:00 (50 minutes)

Presenter: Prof. KORCHEMSKY, Gregory (CEA Saclay)

Session Classification: Thursday

Contribution ID: 25

Type: **not specified**

High-Energy Collider Observables at Ultimate Precision in QCD

Thursday 14 September 2023 09:50 (50 minutes)

Presenter: GEHRMANN, Thomas Kurt (University of Zurich (CH))

Session Classification: Thursday

Contribution ID: 26

Type: **not specified**

Perturbative techniques for precision collider physics and cosmology

Thursday 14 September 2023 11:10 (50 minutes)

Presenter: Prof. ANASTASIOU, Babis (ETH Zurich)

Session Classification: Thursday

Contribution ID: 27

Type: **not specified**

From QCD to Gravitational Waves

Thursday 14 September 2023 14:00 (50 minutes)

Presenter: KOSOWER, David (Centre d'Etudes Nucleaires de Saclay (FR))

Session Classification: Thursday

Contribution ID: 28

Type: **not specified**

Computing Feynman's parton distributions on lattice using large-momentum effective theory

Thursday 14 September 2023 14:50 (50 minutes)

Presenter: JI, Xiangdong

Session Classification: Thursday

Contribution ID: 29

Type: **not specified**

New Heavy Exotics

Thursday 14 September 2023 16:10 (50 minutes)

Presenter: KARLINER, Marek (Tel Aviv University (IL))

Session Classification: Thursday

Contribution ID: 30

Type: **not specified**

Holographic Light-Front QCD: A Novel Nonperturbative Approach to Color Confinement and Hadron Physics

Thursday 14 September 2023 17:00 (50 minutes)

Presenter: BRODSKY, Stanley J. (SLAC National Accelerator Laboratory, Stanford University)

Session Classification: Thursday

Contribution ID: 31

Type: **not specified**

Exploring proton's quark/gluon structure without breaking it

Friday 15 September 2023 09:00 (50 minutes)

Presenter: Dr QIU, Jianwei (Jefferson Lab)

Session Classification: Friday

Contribution ID: 32

Type: **not specified**

Nonrelativistic conformal field theory and nuclear reactions

Friday 15 September 2023 09:50 (50 minutes)

Presenter: Prof. SON, Dam Thanh (University of Chicago)

Session Classification: Friday

Contribution ID: 33

Type: **not specified**

Yang-Mills Glueballs as Closed Rotating Strings

Friday 15 September 2023 11:10 (50 minutes)

Presenter: DUBOVSKY, Sergei (NYU)

Session Classification: Friday

Contribution ID: 34

Type: **not specified**

From QCD to QGP: Strong interaction in extremis

Friday 15 September 2023 14:00 (50 minutes)

Presenter: Dr WANG, Xin-Nian (Lawrence Berkeley National Lab. (US))

Session Classification: Friday

Contribution ID: 35

Type: **not specified**

From partons to jets and back - Simulating QCD interactions at highest energies

Friday 15 September 2023 14:50 (50 minutes)

Presenter: HOECHE, Stefan (Fermilab)

Session Classification: Friday

Contribution ID: 36

Type: **not specified**

The Rise of Jet Substructure

Friday 15 September 2023 16:10 (50 minutes)

Presenter: Prof. MOULT, Ian (Yale University)

Session Classification: Friday

Contribution ID: 37

Type: **not specified**

TBA

Presenter: MISTLBERGER, Bernhard

Session Classification: Friday

Contribution ID: **38**

Type: **not specified**

Adjourn

Friday 15 September 2023 17:00 (15 minutes)

Presenters: BERN, Zvi (University of California Los Angeles (US)); Prof. KANG, Zhongbo

Session Classification: Friday

Contribution ID: 39

Type: **not specified**

Reminiscences and Reflections on 50 plus years of QCD

Monday 11 September 2023 19:30 (2 hours)

Prof. Helen Quinn will give a dinner talk. The talk will start just after dessert is served.

Presenter: QUINN, Helen (SLAC)