

Session Program

20-30 Jul 2015



Summer School "Theory Challenges for LHC Physics"

Workshop "Calculations for Modern and Future Colliders"

Theory challenges for LHC physics

CALC2015 Workshop

Joint Institute for Nuclear Research, Bogoliubov Laboratory of Theoretical Physics
Russia, Dubna, Joliot-Curie 6

Thursday 23 July

14:30

CALC2015 Workshop

Session | **Location:** BLTP JINR, Conference Hall

14:30–15:00

Massless Propagators and Multiloop QCD: new results

Speaker

Konstantin Chetyrkin

15:00–15:30

Three-loop cusp anomalous dimension in QCD

Speaker

Andrey Grozin

15:30–16:00

Static potential in perturbative QCD: the results and applications

Speaker

Dr Andrei Kataev

16:00–16:20

Coffee break

16:20–16:50

Six loop beta function in ϕ^4 model

Speaker

Mikhail Kompaniets

16:50–17:10

On the running strong coupling and b-quark mass in the SM: two-loop electroweak decoupling corrections

Speaker

Dr Alexander Bednyakov

17:10–17:30

Towards four-loop gauge coupling beta-functions in the SM

Speaker

Andrey Pikelner

17:30–17:50

Pair production of pseudoscalar and vector Bc mesons at the LHC

Speaker

Anton Trunin

18:00

Friday 24 July

14:30

CALC2015 Workshop

Session | **Location:** BLTP JINR, Conference Hall

14:30–15:00

Evaluating Feynman integrals by uniformly transcendental differential equations

Speaker

Dr Vladimir Smirnov

15:00–15:30

Reducing differential equations for multiloop integrals to epsilon form

Speaker

Roman Lee

15:30–16:00

FIRE5: a C++ implementation of Feynman Integral REduction

Speaker

Alexander Smirnov

16:00–16:20

Coffee break

16:20–16:40

Functional equations for multiloop Feynman integrals

Speaker

Dr Oleg Tarasov

16:40–17:00

Supersymmetric Yang-Mills theory in higher dimensions

Speaker

Dmitry Vlasenko

17:00–17:20

Symmetrical approach to three-body phase space

Speaker

Dr Andrei Davydychev

17:20–17:40

Dynamical gluon mass and linear confinement

Speaker

Dr César Ayala

18:30

Sunday 26 July

14:30

CALC2015 Workshop

Session | **Location:** JINR BLTP, Conference Hall

14:30–15:00

Search for BFKL-evolution effects at high energy collisions

Speaker

Victor Kim

15:00–15:30

β -expansion in QCD and generalization of BLM optimization procedure

Speaker

Andrey Kataev

15:30–16:00

QCD at high energy and the Parton Reggeization Approach

Speaker

Vladimir Saleev

16:00–16:20

Coffee break

16:20–16:40

Pair correlations in particle and jet production at the LHC in the parton Reggeization approach

Speaker

Alexandera Shipilova

16:40–17:00

Diphoton production at Tevatron and the LHC in the NLO* approximation of the Parton Reggeization Approach

Speaker

Mr Maxim Nefedov

17:00–17:20

Exploring the 3-dimensional structure of the nucleon with QCD

Speaker

Igor Cherednikov

17:20–17:40

Two-loop matching relations in the SM

Speaker

Oleg Veretin

17:40

Monday 27 July

14:30

CALC2015 Workshop

Session | **Location:** BLTP JINR, Conference Hall

14:30–15:00

Higgs bosons in SM extensions: temperature effective loop corrections

Speaker

Dr Mikhail Dolgoplov

15:00–15:30

A Simple Subtraction Scheme for Calculation of the Anomalous Magnetic Moment of the Electron in QED

Speaker

Mr Sergey Volkov

15:30–16:00

XQCAT: a model independent analysis of new heavy quarks at the LHC

Speaker

Luca Panizzi

16:00–16:20

Coffee break

16:20–16:40

Alternative renormalization group for the standard model

Speaker

Dr Grigory Pivovarov

16:40–17:00

Pair production of quarkonia at NLO

Speaker

Andrei Onishchenko

17:00–17:20

Resolving Color and Kinematics for QCD Amplitudes

Speaker

Alexander Ochirov

17:20–17:40

The energy evolution of dark matter halos: how to fit observational data?

Speaker

Dr Anton Baushev

17:40–18:00

Lepton Flavor Violation in SUSY SO(10) Theories using Non Universal Gaugino Mass Models in Light Of LHC Results on Higgs

Speaker

Ms Gayatri Ghosh

18:30

Tuesday 28 July

14:30

CALC2015 Workshop

Session | **Location:** BLTP JINR, Conference Hall

14:30–15:00 **HERAFitter project and its related studies**

Speaker

Ringaile Placakyte

15:00–15:30 **New developments in the MCSANC tool.**

Speaker

Andrey Saproinov

15:30–16:00 **Beyond NNLL' qT resummation with CuTe**

Speaker

Thomas Luebbert

16:00–16:20 **Coffee break**

16:20–16:40 **Dark vector boson and (g-2) muon anomaly**

Speaker

Mr Nikolay Krasnikov

16:40–17:00 **Efficient calculation with Clifford algebra.**

Speaker

Yahor Dydyska

17:00–17:20 **Event generator LePaProGen for the Drell-Yan process**

Speaker

Vitaly Yermolchik

17:20–17:40

Recent developments in the fast reproduction of QCD calculations with the APPLgrid project

Speaker

Mark Sutton

18:30

Wednesday 29 July

14:30

CALC2015 Workshop

Session | **Location:** BLTP JINR, Conference Hall

14:30–15:00

Hadronic contributions to electroweak observables in the framework of dispersive approach to QCD

Speaker

Dr Alexander Nesterenko

15:00–15:30

S-matrix approach to the Z line shape

Speaker

Tord Riemann

15:30–16:00

The property of maximal transcendentality: calculation of master integrals

Speaker

Dr Anatoly Kotikov

16:00–16:20

Coffee break

16:20–16:40

Massive gluons

Speaker

Dr Sergey Larin

16:40–17:00

Taking into account of hard photons in MOLLER experiment

Speaker

Dr Vladimir Zykunov

17:00–17:20

Identifying large extra dimensions in diphoton and dilepton production at the Large Hadron Collider

Speaker

Dr Inna Serenkova

18:30