

QCD@LHC2022

QCD@LHC2022
28 November 2022 to 2 December 2022
IJCLab Orsay, France

Monday, November 28, 2022 - Friday, December 2, 2022

IJCLab Orsay

Scientific Program

This is the preliminary schedule of the 3 parallel sessions (1 joint + 2)

Monday pm

[WG1-WG5] WG2 WG7

[WG4-WG6] WG2 WG7

Tuesday pm

[WG2-WG8] WG3 WG4

[WG6-WG7] WG3 WG4

Wednesday pm

[WG4-WG7] WG1 WG5

[WG2-WG4-WG6-WG7] WG1 WG5

Friday am

[WG1-WG3] WG8 WG6

[WG2-WG5] WG8 WG6

WG1: Higher Order and Resummed Calculations

Conveners:

Theory: S. Abreu (CERN)

Experiment: K. Rabbertz (KIT)

Local coordinator: E. Chaubey (Turin U.)

Topics include:

Multi-loop computations

Subtractions schemes

Experimental tests of QCD precision computations

Resummation techniques

Colour-glass condensate and shock-wave approaches beyond Born order

Experimental searches for the BKFL dynamics and saturation

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WG2: Event Simulations and Monte Carlo Tools

Conveners:

Theory: I. Helenius (Jyvaskyla U.)

Experiment: A. Davis (Manchester U.)

Local coordinator: C. Flore (IJCLab)

Topics include:

MC tools
Parton shower and their matching to event generators
Simulation for prospective studies
Machine learning and deep learning techniques
...

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WG3: Top, Higgs and EW Physics

Conveners:

Theory: E. Vryonidou (Manchester U.)
Experiment: N. Lorenzo Martinez (LAPP, Annecy)
Local coordinator: E. Chapon (IRFU, Paris-Saclay U.)

Topics include:

EW precision measurements
Top quark mass and coupling measurements
Higgs boson production and properties
Electroweak production of boson and di-bosons (VBF, VBS)
(Multi)boson production (V, VV, VVV) (with V = W, Z, photon)
EFT interpretation of top, Higgs and EW physics

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WG4: Heavy-quark and Quarkonium Physics

Conveners:

Theory: M. Garzelli (Hamburg U.)
Experiment: L. An (CERN & Peking U., CHEP)
Local coordinator: C. Hadjidakis (IJCLab, Paris-Saclay U.)

Topics include:

Open heavy-flavour and quarkonium production at the LHC
Heavy-quark hadronisation
Quarkonium/open heavy-flavour associated production channels.
PDFs and heavy quarks
Heavy quarks and higher-twist effects.
Charm and bottom spectroscopy.
Exotics states including heavy quarks.
Heavy quarks on the lattice.
Cold nuclear matter effects on heavy quarks and quarkonia.

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WG5: Jet Physics

Conveners:

Theory: B. Ducloué (U. Edinburgh, Higgs Ctr. Theor. Phys.)

Experiment: M. Nguyen (Ecole Polytechnique, Palaiseau)

Local coordinator: G. Soyez (IPhT, Paris-Saclay U.)

Topics include:

Jet substructure phenomenology and searches

New jet (substructure) observables and algorithms

QCD measurements with jets

Heavy-flavoured jets

Machine learning

Jet substructure in heavy-ion collisions

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WG6: Quark-Gluon Plasma & Multi Parton Interactions

Conveners:

Theory: J. Ghiglieri (SUBATECH, Nantes)

Experiment: B. Trzeciak (CTU, Prague)

Local coordinator: A. Francisco (DPhN, Paris-Saclay U.)

Topics include:

Soft and hard probes of the QGP

Collectivity in small systems

Double parton scatterings and parton correlations

Nuclear effects

...

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WG7: Parton tomography from 1D to 5D

Conveners:

Theory: S. Zafeiropoulos (CPT, Marseille)

Experiment: C. Van Hulse (Alcala de Henares)

Local coordinator: V. Bertone (DPhN, Paris-Saclay U.)

Topics include:

PDFs, FFs, GPDs, TMDs, GTMDs

Spin asymmetries

Exclusive reactions

Diffraction physics

Small-x and saturation

...

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WG8: QCD for BSM studies

Conveners:

Theory: M. Madigan (DAMTP, Cambridge U.)

Experiment: D. Price (Manchester U.)

Local coordinator: B. Fuks (LPTHE, Sorbonne U.)

Topics include:

Precision predictions for BSM

Flavour anomalies, B meson mixing, CP violation

PDF and BSM physics

SMEFT

...

Email: WG8-QCDatLHC2022@ijclab.in2p3.fr