

QCD Structure of the Nucleon (QCD-N2021)

Monday 04 October 2021

Monday: Monday 1 - Colegio San Ildefonso (09:00-11:00)

-Conveners: Echevarria, Miguel (University of Alcala)

time	title	presenter
09:00	Welcome	ECHEVARRIA, Miguel (University of Alcala)
09:10	Perspective on the Origin of Visible Mass	ROBERTS, Craig (Nanjing University)
09:40	The (non-)perturbative nature of atoms and hadrons	Prof. HOYER, Paul (University of Helsinki)
10:10	The Path to Proton Structure at One-Percent Accuracy	ROJO, Juan (VU Amsterdam)
10:40	LHCb fixed-target program results and prospects	FRANZOSO, Edoardo (Università e INFN, Ferrara (IT))

Coffee break - Colegio San Ildefonso (11:00-11:30)

Monday: Monday 2 - Colegio San Ildefonso (11:30-13:30)

-Conveners: Nagar, Riccardo (University of Milan-Bicocca)

time	title	presenter
11:30	Novel lattice QCD approaches for PDFs	CICHY, Krzysztof (Adam Mickiewicz University)
12:00	Determining the x -dependence of PDFs from Lattice QCD	ZHAO, Yong (Argonne National Laboratory)
12:30	High- x structure of nucleons and nuclei	KUSINA, Aleksander (Institute of Nuclear Physics PAN, Krakow)
12:50	Valence parton distribution of pion from lattice QCD at physical point	GAO, Xiang (CCNU)
13:10	New Approach in Calculating Valence Quark Distributions in the Nucleon	SARGSIAN, Misak (Florida International University)

Lunch - Colegio San Ildefonso (13:30-14:45)

Monday: Monday 3 - Colegio San Ildefonso (14:45-16:25)

-Conveners: Alarcón, José Manuel (Universidad de Alcalá)

time	title	presenter
14:45	Nucleon electromagnetic form factors at low Q^2 : Analyticity, dynamics, structure	WEISS, Christian
15:15	Precision Proton Radius Measurements and Calculations	Dr HIGINBOTHAM, Douglas (Jefferson Lab)

15:45	The proton radius and its relatives from Effective Field Theories	PESET MARTIN, Clara (Universidad de Alcalá de Henares)
16:05	High precision measurements of the proton Generalized Polarizabilities at Jefferson Lab	ATAC, Hamza (Temple University)

Coffee break - Colegio San Ildefonso (16:25-17:00)**Monday: Monday 4 - Colegio San Ildefonso (17:00-19:00)****-Conveners: Vogelsang, Werner (University of Tübingen)**

time	title	presenter
17:00	A new approach to inclusive lepton-hadron scattering with both QED & QCD factorization	QIU, Jianwei (Jefferson Lab)
17:30	Overview on proton spin: current status and future perspective	YUAN, Feng (Lawrence Berkeley National Laboratory)
18:00	Color Confinement, Vortices and the Pion Tornado	Prof. SIVERS, Dennis (Portland Physics Institute and University of Michigan)
18:30	Status of Phenomenology for the Transversity Distribution	PITONYAK, Daniel (Lebanon Valley College)

Tour Alcalá - Colegio San Ildefonso (19:15-20:15)

Tuesday 05 October 2021

Tuesday: Tuesday 1 - Colegio San Ildefonso (09:00-11:00)

-Conveners: Tael, Pieter (Ecole Polytechnique)

time	title	presenter
09:00	The special status of 3D QCD in the Standard Model	MULDERS, Piet (VU/Nikhef)
09:30	Higher-order corrections to SIDIS	VOGELSANG, Werner (University of Tübingen)
10:00	Progress in the extraction of TMDs from global data sets	BACCHETTA, Alessandro (University of Pavia and INFN)
10:30	Challenges in phenomenology of TMD distributions	VLADIMIROV, Alexey

Coffee break - Colegio San Ildefonso (11:00-11:30)

Tuesday: Tuesday 2 - Colegio San Ildefonso (11:30-13:30)

-Conveners: Schnell, Gunar (University of the Basque Country UPV/EHU & IKERBASQUE)

time	title	presenter
11:30	Status of fragmentation functions analyses	RADICI, Marco (INFN - Sezione di Pavia)
12:00	TMD studies at COMPASS	KERBIZI, Albi (INFN Trieste)
12:30	Recent HERMES results on spin asymmetries in semi-inclusive deep-inelastic scattering	KARYAN, Gevorg (A.I. Alikhanyan National Science Laboratory)

Lunch - Colegio San Ildefonso (13:30-14:45)

Tuesday: Tuesday 3 - Colegio San Ildefonso (14:45-16:35)

-Conveners: Cristian Pisano

time	title	presenter
14:45	RHIC-spin PHENIX (TBA)	BAZILEVSKY, Alexander (Brookhaven National Laboratory)
15:15	CLAS12 + JLab24 (TBA)	AVAGYAN, Harutyun (Jefferson Lab)
15:45	OAM, GTMDs, etc (TBA)	HATTA, Yoshitaka (BNL)
16:15	GTMD model predictions for diffractive dijet production at the EIC	BOER, Daniel (University of Groningen)

Coffee break - Colegio San Ildefonso (16:35-17:00)

Tuesday: Tuesday 4 - Colegio San Ildefonso (17:00-19:00)

-Conveners: Scimemi, Ignazio (Universidad Complutense Madrid)

time	title	presenter
17:00	The SpinQuest (E1039) experiment at Fermilab	FERNANDO, Ishara (University of Virginia)
17:30	e+jet, H1... (TBA)	NACHMAN, Benjamin (Lawrence Berkeley National Laboratory)
18:00	Jets for nucleon structure (TBA)	KANG, Zhongbo (UCLA)
18:30	Generalized parton distributions in modern hadron physics	FREESE, Adam (University of Washington)

Wednesday 06 October 2021

Wednesday: Wednesday 1 - Colegio San Ildefonso (09:00-11:00)

-Conveners: Schlegel, Marc (University of Tübingen)

time	title	presenter
09:00	Calculation of transverse momentum dependent distributions beyond the leading power	MOOS, Valentin (University of Regensburg)
09:20	Polarized PDFs and TMDs for spin-1 hadrons	KUMANO, Shunzo (KEK/J-PARC)
09:40	Pressure distribution inside the Nucleon	MUKHERJEE, Asmita
10:00	Gravitational form factors of the nucleon in chiral EFT	GEGELIA, Jambul (RUB)
10:20	Revisiting GPD evolution	BERTONE, Valerio (CEA Saclay)
10:40	Challenges around DVCS	DUTRIEUX, Hervé (CEA Saclay/Irfu)

Coffee break - Colegio San Ildefonso (11:00-11:30)

Wednesday: Wednesday 2 - Colegio San Ildefonso (11:30-13:30)

-Conveners: Cichy, Krzysztof (Adam Mickiewicz University)

time	title	presenter
11:30	First-time measurement of Timelike Compton Scattering, with the CLAS12 detector	CHATAGNON, Pierre (INFN e Università Genova (IT))
11:50	The pseudoscalar nucleon structure	Prof. RUIZ ARRIOLA, Enrique (Universidad de Granada, Spain)
12:10	Nucleon sigma terms from lattice QCD	VARNHORST, Lukas (Aix-Marseille University)
12:30	COMPASS GPDs (TBA)	LIN, Po-Ju (CEA - Université Paris-Saclay)
13:00	GPDs from Lattice QCD	CONSTANTINOU, Martha (Temple University)

Lunch - Colegio San Ildefonso (13:30-14:45)

Wednesday: Wednesday 3 - Colegio San Ildefonso (14:45-17:00)

-Conveners: Hoyer, Paul (University of Helsinki)

time	title	presenter
14:45	Quantum parton correlators (TBA)	RICO ORTEGA, Enrique (UPV/EHU & Ikerbasque)
15:15	Tensor Network and Quantum Simulation Methods for Lattice Gauge Theories	ZOHAR, Erez (Hebrew University of Jerusalem)
15:45	Determining the proton content with a quantum computer	PÉREZ-SALINAS, Adrián (Barcelona Supercomputing Center)

16:05	Quantum computation of non-perturbative general Parton distribution functions	GOLDSTEIN, Gary (Tufts University)
16:25	Simulating collider physics on quantum computers using effective field theories (TBA)	BAUER, Christian (LBNL)

Excursion (Madrid) - Colegio San Ildefonso (17:30-22:30)

Thursday 07 October 2021

Thursday: Thursday 1 - Colegio San Ildefonso (09:00-11:00)

-Conveners: Alexey Vladimirov

time	title	presenter
09:00	Double parton scattering: collinear and TMD factorization	NAGAR, Riccardo (University of Milan-Bicocca)
09:30	Double parton distributions: An introduction	PLÖßL, Peter (Deutsches Elektronen-Synchrotron DESY)
10:00	A new light on the transverse proton structure: double parton scattering via photon-proton interactions	RINALDI, Matteo (Dipartimento di Fisica e Geologia. Università degli studi di Perugia. Istituto Nazionale di Fisica Nucleare, sezione di Perugia.)
10:20	Minkowskian three-body model of the proton and Ioffe-time imaging	YDREFORS, Emanuel (IMPCAS)
10:40	3D proton imaging at low- and moderate-x via TMD gluon distributions	CELIBERTO, Francesco Giovanni (ECT*/FBK Trento & INFN-TIFPA)

Coffee break - Colegio San Ildefonso (11:00-11:30)

Thursday: Thursday 2 - Colegio San Ildefonso (11:30-13:20)

-Conveners: D'Alesio, Umberto (University and INFN Cagliari)

time	title	presenter
11:30	Effective quarks and gluons in mesons and baryons	GÓMEZ-ROCHA, María (Universidad de Granada)
11:50	J/ψ polarization and gluon TMDs in SIDIS	PISANO, Cristian
12:10	Revisiting the impact of NLO QCD corrections to inclusive photoproduction of J/ψ and Upsilon in lepton-proton collisions to probe gluon PDF at low scale	YEDELKINA, Yelyzaveta (Paris-Saclay University, IJCLab Orsay)
12:30	Semi-inclusive photons (TBC)	SCHLEGEL, Marc (University of Tübingen)
12:50	Progress of the TMD calculation through LaMET	YANG, Yi-Bo

Lunch - Colegio San Ildefonso (13:20-14:45)

Thursday: Thursday 3 - Colegio San Ildefonso (14:45-16:25)

-Conveners: Bertone, Valerio (CEA Saclay)

time	title	presenter
14:45	JLab HALL-A 3d (TMD&GPD) results (TBA)	LIYANAGE, Nilanga (University of Virginia)

15:15	CLASS 3D results (TBA)	HAYWARD, Timothy (University of Connecticut)
15:45	Hadron transverse-momentum distributions from muon-proton DIS	MARTIN, Anna (Trieste University and INFN)
16:05	"Spin effects and two-photon exchange in low-energy electron-nucleon scattering: a $1/N_c$ expansion approach"	GOITY, Jose (Hampton University and Jefferson Lab)

Coffee break - Colegio San Ildefonso (16:30-17:00)**Thursday: Thursday 4 - Colegio San Ildefonso (17:00-18:00)****-Conveners: Lansberg, Jean-Philippe (Paris-Saclay U. - IJCLab - CNRS)**

time	title	presenter
17:00	Recent results on the physics of the proton's spin at the STAR experiment	FAZIO, Salvatore (University of Calabria & INFN Cosenza - Italy)
17:30	Color Confinement, Supersymmetric Properties of Hadron Physics, and Novel Features of QCD from Light-Front Holography	BRODSKY, Stanley (SLAC National Accelerator Laboratory, Stanford University)

Tour UAH - Colegio San Ildefonso (18:15-19:00)**Social dinner (20:30-22:30)**

Friday 08 October 2021

Friday: Friday 1 - Colegio San Ildefonso (09:00-11:00)

-Conveners: Martin, Anna (Trieste University and INFN)

time	title	presenter
09:00	New Phenomenological analysis of BELLE data	GONZALEZ-HERNANDEZ, J Osvaldo (University of Turin)
09:20	Two-hadron production in e^+e^- collisions within a TMD scheme and the Λ polarizing fragmentation function	D'ALESIO, Umberto (University and INFN Cagliari)
09:40	Massive event shapes	MATEU, Vicent (University of Salamanca)
10:00	The Regge Limit and Infrared Factorisation of 2 to 3 scattering amplitudes in QCD	DEL RÍO GARCÍA, Óscar (Universidad Complutense Madrid)
10:20	Current status of the muon $g-2$	SANCHEZ PUERTAS, Pablo (IFAE)

Coffee break - Colegio San Ildefonso (11:00-11:30)

Friday: Friday 2 - Colegio San Ildefonso (11:30-14:00)

-Conveners: Fazio, Salvatore (University of Calabria & INFN Cosenza - Italy)

time	title	presenter
11:30	AMBER@CERN - a new QCD facility	KABUSS, Eva-Maria (Institut fuer Kernphysik, Mainz University)
12:00	Prospects for quarkonium studies at the high-luminosity LHC	LANSBERG, Jean-Philippe (Paris-Saclay U. - IJCLab - CNRS)
12:30	The LHCspin project: status and perspectives	PAPPALARDO, Luciano (University of Ferrara)
13:00	EIC overview (TBA)	TAEELS, Pieter (Ecole Polytechnique)
13:30	Nuclear effects in the Electron Ion Collider	GONZALEZ FERREIRO, Elena (USC)

Lunch - Colegio San Ildefonso (14:00-15:15)