

# Preliminary Timetable (changes are possible)

## November 8

	Moscow time
● <b>Welcome address</b>	<b>10:15-10:30</b>
● <b>Morning session</b>	
“New Results in Hadron Spectroscopy (light quarks)“	<b>10:30–14:00</b>
<u>Chairperson</u> Sergey Sadovsky (Logunov IHEP, NRC KI)	
1. Andrey Sarantsev (NRC Kurchatov Institute, PNPI)	10:30-11:00
<i>Recent Progress in Partial-Wave Analysis</i>	
2. Eberhard Klempt (University of Bonn)	11:00-11:30
<i>The Scalar and Tensor Glueball in Production and Decay</i>	
3. Alex Keshavarzi (University of Manchester)	11:30 -12:00
<i>Muon g-2: hadronic contributions</i>	
4. José Ramon Peláez (Universidad Complutense de Madrid)	12:00-12:30
<i>Determination of Light Scalar Meson Properties from Dispersive and Analytic Methods Applied to Meson-Meson Scattering</i>	
5. Constantia Alexandrou (University of Cyprus)	12:30-13:00
<i>Nucleon Axial Form Factors from Lattice QCD</i>	
6. <b>Discussion</b>	13:00-14:00
<u>Discussion leader</u> Eberhard Klempt (University of Bonn)	
	Moscow time
● <b>Evening session</b>	
“Quark-Gluon Matter at Finite Densities and Temperatures”	<b>15:30-19:30</b>
<u>Chairperson</u> Roman Zhokhov (IZMIRAN Troitsk)	
1. Anton Andronic (Westfälischen Wilhelms-Universität Münster)	<b>15:30-16:00</b>
<i>Hadron production on heavy-ion and pp collisions at the LHC with ALICE</i>	
2. Giorgio Torrieri (State University of Campinas, Brasil)	<b>16:00-16:30</b>
<i>Making sense of Hydrodynamics with 50 particles.</i>	
3. Fabian Rennecke (Justus Liebig University Giessen)	<b>16:30-17:00</b>
<i>Moat Regimes in QCD and their Signatures in Heavy-Ion Collisions</i>	

4. Victor Braguta (JINR) **17:00-17:30**  
*Electromagnetic conductivity of quark-gluon plasma at non-zero baryon density*
5. Owe Philipsen (Goethe-Universität Frankfurt am Main) **17:30 –18:00**  
*The chiral phase transition for different numbers of quark flavours*
6. Andreas Schmitt (University of Southampton) **18:00-18:30**  
*Holographic nuclear matter with isospin asymmetry*
7. Rajeev Singh (Institute of Nuclear Physics, Polish Academy of Sciences) **18:30–18:45**  
*Relativistic formulation of spin hydrodynamics framework based on GLW spin and energy-momentum tensors*
- Discussion** **19:00-20:00**

**Discussion leader** Giorgio Torrieri (State University of Campinas, Brazil)

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## November 9

**Moscow time**

● **Morning session**

“New Results in Hadron Spectroscopy (heavy quarks)” **10:00 – 14:15**

**Chairperson** Alexander Berezhnoy (Skobeltsyn Institute of Nuclear Physics)

1. Alexey Nefediev (Lebedev Physical Institute of RAS) 10:00–10:30  
*Double- $J/\psi$  system in the spotlight of recent LHCb data*
2. Abhishek Mohapatra (TU München) 10:30 –11:00  
*Inclusive Decays of Heavy Quark Hybrids*
3. Marc Wagner (Goethe University Frankfurt) 11:00–11:30  
*Masses and Structure of Exotic Heavy-Quark Mesons from Lattice QCD*  
*Static Potentials*
4. Saša Prelovšek (Ljubljana Univ.& Regensburg Univ) 11:30–12:00  
*Spectroscopy of exotic mesons from lattice simulations*

**Break 12.00-12.15**

5. Ilya Belov (SINP, Lomonosov MSU) 12:15–12:45  
*Production of D-wave states of  $bc$  quarkonium at the LHC*

6. Vitaly Vorobyev (LHCb ) 12:45–13:15  
*TBA*
7. **Discussion** 13:15–14:15  
Discussion leader Antonio Vairo (Physik-Dep., Technische Univ. München)
- Moscow time**
- **Evening Session**
- “Non-perturbative Methods for Soft Hadron Scattering” 15:30 – 19:00  
Chairperson Anton Godizov (Logunov IHEP NRC KI)
1. Christophe Royon (University of Kansas) 15:30-16:00  
On behalf of the D0 and TOTEM Collaborations.  
*The odderon discovery by the D0 and TOTEM collaborations*
2. Oleg Selyugin (BLTP, JINR) 16:00-16:30  
*Hadron potential at large distances and fine structure of the diffraction peak at 13 TeV*
3. Maria Margherita Obertino (University of Torino and INFN) 16:30-17:00  
*Study of central exclusive production with the CMS Precision Proton Spectrometer (PPS)*
4. Piotr Lebiedowicz ( Institute of Nuclear Physics PAN ) 17:00-17:30  
*Central exclusive diffractive production of axial-vector  $f_1$  mesons in proton - proton collisions*
5. Nicola Turini (University of Siena and INFN) 17:30 -18:00  
*Prospect for new physics observation with the CMS Precision Proton Spectrometer (PPS)*
6. **Discussion** 18:00-19:00  
Discussion leader Vladimir Petrov (Logunov IHEP NRC KI).
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## November 10

**Moscow time**

- **Morning session**
- “Lattice Simulation for Hadron Phenomenology” 11:00 – 14:30  
Chairperson Atsushi Nakamura (FEFU / Osaka Univ.)

1. Olaf Kaczmarek (Bielefeld University) 11:00- 11:30  
*Heavy quark spectral functions and charm diffusion*
2. Andrey Kotov (Forschungszentrum Jülich) 11:30- 12:00  
*QCD phase transition for various number of flavours*
3. Nikolai Gerasimeniuk (Vladivostok University) 12:00-12:30  
*Applying machine learning methods to prediction problems for lattice observables*
4. Johannes Weber (Humboldt-Universität zu Berlin) 12:30-13:00  
*Static quark-antiquark interactions at non-zero temperature from lattice QCD*
5. Harvey Meyer (Johannes Gutenberg University Mainz) 13:00-13:30  
*A lattice QCD view of the hadronic contributions to the anomalous magnetic moment of the muon*
6. **Discussion** 13:30-14:30  
Discussion leader Maria Paola Lombardo (INFN)

**Moscow time**

● **Evening session**

“Lattice Simulation for Hadron Phenomenology” 15:30 – 19:00

Chairperson Vitaly Bornyakov (Logunov IHEP NRC KI)

1. Gerrit Schierholz (DESY) 15:30-16:00  
*Strong CP problem, neutron electric dipole moment, and the fate of axions*
2. Gunnar Bali (Universität Regensburg) 16:00-16:30  
*The  $\eta/\eta'$  system and large- $N_c$  ChPT: A Lattice QCD Study*
3. Daniel Nogradi (Eotvos University) 13:00-13:30  
*The gauge group and flavor number dependence of  $m_{\nu}/f_{PS}$*
4. Roger Horsley (University of Edinburgh) 17:00-17:30  
*Hadron matrix elements, lattice QCD and the Feynman-Hellmann approach*
5. Krzysztof Cichy (Adam Mickiewicz University) 17:30-18:00  
*Recent progress in partonic structure of the nucleon from lattice QCD*
6. **Discussion** 18:00-19:00  
Discussion leader Gerrit Schierholz (DESY)

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## November 11

Moscow time

● **Morning session**

“Progress in the Confinement Problem”

11:00 – 14:30

Chairperson Vitaly Bornyakov (Logunov IHEP, NRC KI)

1. Kazue Matsuyama (San Francisco State University) 11:00-11:30  
*Excited States of Isolated Fermions in the Higgs phase of gauge Higgs theories*
2. Derek Leinweber (CSSM, University of Adelaide) 11:30 -12:00  
*Centre Vortex Structure of QCD-Vacuum Fields and Confinement*
3. Tsuneo Suzuki (Research Center for Nucl. Phys., Osaka Univ.) 12:00 -12:30  
*Abelian monopoles of the Dirac type and color confinement in QCD*
4. Massimo D'Elia (University of Pisa and INFN) 12:30-13:00  
*Thermal monopoles in full QCD*
5. Kei-Ichi Kondo (Chiba University) 13:00-13:30  
*Confinement, mass gap and gauge symmetry in the Yang-Mills theory*
6. **Discussion** 13:30-14:30  
Discussion leader Jeff Greensite (San Francisco State University)

Moscow time

● **Evening session**

“Rigorous Results in Gauge QFT”

15:30 – 19.00

Chairperson Alexandre Kisselev (Logunov IHEP, NRC KI)

1. Yui Hayashi (Chiba University) 15:30-16:00  
*Rigorous reconstruction of gluon propagator in the presence of complex singularities*
2. Gernot Eichmann (LIP & IST Lisboa) 16:00-16:30  
*Studying mass generation in Landau-gauge Yang-Mills theory*
3. Avner Karasik (Cambridge U., DAMTP) 16:30-17:00  
*Anomalies for anomalous symmetries*

4. Erich Poppitz (Toronto University) 17:00-17:30  
*The mixed 0-form/1-form anomaly in Hilbert space: pouring new wine into old bottles*
  5. Robert Shrock (Stony Brook University) 17:30-18:00  
*Some Recent Results on Renormalization-Group Properties of Quantum Field Theories*
  6. **Discussion** 18:00-19:00  
Discussion leader Robert Shrock (Stony Brook University)
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## November 12

Moscow time

- **Morning session**
- “Quark-Gluon Matter at Finite Densities and Temperatures” 10:00 – 13:30**  
Chairperson Roman Zhokhov (IZMIRAN Troitsk)
1. Pavel Buividovich (University of Liverpool) 10:00-10:30  
*Chiral separation effect and Kondo effect in finite-density SU(2) gauge theory with dynamical fermions*
  2. Yuki Fujimoto (The University of Tokyo) 10:30-11:00  
*Deconfining Phase Boundary of Rapidly Rotating Hot and Dense Matter and Analysis of Moment of Inertia*
  3. Artem Roenko (JINR) 11:00-11:30  
*Influence of relativistic rotation on the confinement-deconfinement transition within lattice simulation*
  4. Yi Yin (Quark Matter Research Center, Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou) 11:30-12:00  
*Spin-momentum correlation in hot and dense QCD matter*
  5. Johannes Weber (Humboldt-Universität zu Berlin) 12:00-12:30  
*Jet transport coefficient  $q^{\wedge}$  in lattice QCD*
  6. **Discussion** 12:30-13:30  
Discussion leader Pavel Buividovich (University of Liverpool)

Moscow time

- **Evening session**  
“Chiral Symmetry Breaking in Hadron Physics” **15:30 – 19.00**  
Chairperson Roman Rogalyov (Logunov IHEP NRC KI)
  
- 1. Ruslan Abramchuk (ITEP, Moscow) 15:30 -16:00  
*The Role of Confinement in the Chiral Symmetry Breaking*
  
- 2. Juan Torres-Rincon (Goethe University Frankfurt) 16:00-16:30  
*Chiral symmetry restoration with three chiral partners*
  
- 3. Evgeny Epelbaum (Ruhr University Bochum) 16:30-17:00  
*Nuclear Forces from Chiral Effective Field Theories*
  
- 4. Marc Catillo (Zurich, ETH) 17:00-17:30  
*Chiral Spin Symmetry and Confinement in QCD*
  
- 5. Dean Lee (Michigan State University) 17:30-18:00  
*Lattice Simulations in Chiral Effective Field Theory*
  
- 6. **Discussion** 18:00-19:00  
Discussion leader Evgeny Epelbaum (Ruhr-Universitaet Bochum)
  
- **Closing address.**

### Wishes to discussion leaders

- It is assumed that each session will end with a general discussion (near one hour).
- The discussion is led by the discussion leader.
- The first part is assumed to be devoted to additional questions which bear a conceptual character.  
It is meant that during the talk time only technical short questions not bearing a conceptual character are admitted. This is regulated by the chairperson.
- In the second part the discussion leader is asked to give a brief summary of the session's reports and a brief description of the most important unresolved problems related to the topic of the session.
- The allocation of time for discussion and summary is left to the discretion of the discussion leader.

### Wishes to speakers

- As one can see from the program, our Workshop concerns various fields sometimes very different from each other, both conceptually and in technical terminology.

- That is why we would like to avoid excessive diversification and to try to preserve to a certain extent the unity of the high energy physics community.
- In this regard, we would like to ask all speakers, if possible, to kindly avoid, if possible, details that are understandable only to a narrow circle of deeply involved experts and to make the presentation simpler and clearer (thus more interesting!) to a wider circle of participants.
- We also believe that it would be of great importance to give, at least in a concise way, the conceptual motivation of your subject.

*We are aware that this task can be rather difficult, so in no way the above wishes are mandatory and every speaker is, certainly, free to deliver her/his talk according to her/his own desire and convenience.*