

QUARKS ONLINE WORKSHOPS-2021

online, May 31 — June 24, 2021.

Program

Moscow, 2021

Monday, May 31

“Integrability, Holography, Higher-Spin Gravity and Strings”

We use Moscow time (GMT+3). The talk times (30+5 min) include 30 min for presentations and 5 min for questions.

Morning Session. 9:45 Moscow Time

Chairman: *Mikhail Vasiliev (Lebedev Physical Inst., Moscow)*

1. Mikhail Vasiliev (Lebedev Physical Inst., Moscow)
Opening I — 15 min
 2. Sergei Kuzenko (U. of Western Australia, Perth)
Higher Spins Down Under — 30 + 5 min
Technical break — 5 min
 3. Mirian Tsulaia (Okinawa Inst. of Science And Technology)
N=1 Supersymmetric Higher Spins in Various Dimensions — 30 + 5 min
Technical break — 5 min
 4. Ioannis Papadimitriou (Korea Inst. for Advanced Study, Seoul)
Anomalies and Supersymmetry — 30 + 5 min
- Discussion — 35 min

Break. 12:30-13:30 Moscow Time

Afternoon Session. 13:30 Moscow Time

Chairman: *Dmitri Sorokin (INFN, Padua)*

1. Carlo Iazeolla (G. Marconi U., Rome)
Boundary conditions, orderings and Fronsdal fields in Vasiliev's higher-spin gravity — 30 + 5 min
Technical break — 5 min
 2. Karapet Mkrtchyan (Imperial College London)
Coloured Poincaré Algebra and Corresponding Particles — 30 + 5 min
Technical break — 5 min
 3. Euihun Joung (Kyung Hee U., Suwon)
Unfolding Conformal Geometry — 30 + 5 min
- Discussion — 35 min

Break. 16:00 -16:30 Moscow Time

Evening Session. 16:30 Moscow Time

Chairman: *Lars Brink (Chalmers U. of Technology, Goteborg)*

1. Boris Altshuler (Lebedev Physical Inst., Moscow) and Mikhail Vasiliev
(Lebedev Physical Inst., Moscow)
Opening II. Sakharov's science achievements in modern perspective — 30 min
tive
 2. Igor Klebanov (Princeton U.)
Two-Dimensional Gauge Theory with Adjoint Matter — 30 + 5 min
Technical break — 5 min
 3. Edvard Musaev (Moscow Inst. of Physics and Technology)
Non-abelian U-dualities — 30 + 5 min
Technical break — 5 min
 4. Ilya Bakhmatov (ITMP, Moscow)
Non-abelian fermionic T-duality — 30 + 5 min
- Discussion — 35 min

Tuesday, June 1

“Integrability, Holography, Higher-Spin Gravity and Strings”

We use Moscow time (GMT+3). The talk times (30+5 min) include 30 min for presentations and 5 min for questions.

Morning Session. 10:00 Moscow Time

Chairman: *Sergei Kuzenko (U. of Western Australia, Perth)*

1. Ioseph Buchbinder (Tomsk State Pedagogical U.)
On a gauge-invariant deformation of a classical gauge-invariant theory — 30 + 5 min
Technical break — 5 min
 2. Maxim Grigoriev (Lebedev Physical Inst., Moscow & ITMP, Moscow)
Interacting gauge fields from quantized spinning particles — 30 + 5 min
Technical break — 5 min
 3. Anatoly Dymarsky (U. of Kentucky)
Quantum codes and conformal field theories — 30 + 5 min
- Discussion — 35 min

Break. 12:30-13:30 Moscow Time

Afternoon Session. 13:30 Moscow Time

Chairman: *Irina Aref'eva (Steklov Math. Inst., Moscow)*

1. Dmitry Kazakov (JINR, Dubna)
Non-renormalizable theories — 30 + 5 min
Technical break — 5 min
 2. Evgeny Ivanov (BLTP JINR, Dubna)
Higher-dimensional invariants in 6D SYM theory — 30 + 5 min
Technical break — 5 min
 3. Andrei Smilga (U. of Nantes)
Spin(7) instantons in eight dimensions — 30 + 5 min
- Discussion — 35 min

Break. 16:00 -17:00 Moscow Time

Evening Session. 17:00 Moscow Time

Chairman: *Igor Klebanov (Princeton U.)*

1. Glenn Barnich (Brussels U., PTM)
Coadjoint representation of BMS_4 on celestial Riemann surfaces — 30 + 5 min
Technical break — 5 min
 2. Xavier Bekaert (U. of Tours)
BMS higher-spin algebra and symmetries of d'Alembert equation — 30 + 5 min
Technical break — 5 min
 3. Dmitry Ponomarev (ITMP, Moscow)
Spinor-helicity formalism in AdS and higher spins — 30 + 5 min
- Discussion — 35 min

Wednesday, June 2

“Integrability, Holography, Higher-Spin Gravity and Strings”

We use Moscow time (GMT+3). The talk times (30+5 min) include 30 min for presentations and 5 min for questions.

Morning Session. 10:00 Moscow Time

Chairman: *Ioseph Buchbinder (Tomsk State Pedagogical U.)*

1. Yurii Zinoviev (IHEP, Serpukhov)
On massive spin 2 in Fradkin-Vasiliev formalism — 30 + 5 min
Technical break — 5 min
 2. Alexey Sharapov (Tomsk State U.)
Observables and Invariants in 4D Higher Spin Gravity — 30 + 5 min
Technical break — 5 min
 3. Yasha Neiman (Okinawa Inst. of Science And Technology)
What is the force between two higher-spin black holes? — 30 + 5 min
- Discussion — 35 min

Break. 12:30-13:30 Moscow Time

Afternoon Session. 13:30 Moscow Time

Chairman: *Xavier Bekaert (U. of Tours)*

1. Matthias Gaberdiel (ETH, Zurich)
An exact AdS/CFT duality — 30 + 5 min
Technical break — 5 min
 2. Bo Sundborg (Stockholm U.)
Thermal Large N Holography — 30 + 5 min
Technical break — 5 min
 3. Andrei Parnachev (Trinity College Dublin)
Stress tensor sector of conformal correlators and holography — 30 + 5 min
- Discussion — 35 min

Break. 16:00 -17:00 Moscow Time

Evening Session. 17:00 Moscow Time

Chairman: *Alexey Isaev (BLTP JINR, Dubna)*

1. Augusto Sagnotti (Scuola Normale Superiore, Pisa)
Stability Issues with Broken Supersymmetry — 30 + 5 min
Technical break — 5 min
 2. Per Sundell (Andres Bello Natl. U., Santiago)
Quantization of massless particles and gauged Poisson sigma models — 30 + 5 min
Technical break — 5 min
 3. Dario Francia (Enrico Fermi Ctr., Rome & Roma Tre U.)
On the Lagrangian formulation of the double copy — 30 + 5 min
- Discussion — 35 min

Thursday, June 3

“Integrability, Holography, Higher-Spin Gravity and Strings”

We use Moscow time (GMT+3). The talk times (30+5 min) include 30 min for presentations and 5 min for questions.

Morning Session. 10:00 Moscow Time

Chairman: *Konstantin Zarembo (Nordita, Stockholm)*

1. Alexander Belavin (Landau Inst. for Theoretical Physics, Moscow)
On multiple mirrors of Calabi-Yau manifolds — 30 + 5 min
Technical break — 5 min
 2. Alexander Gorsky (ITEP, Moscow)
TT deformation of 2d Yang-Mills: collective field theory and phase transitions — 30 + 5 min
Technical break — 5 min
 3. Alexey Isaev (BLTP JINR, Dubna)
Massless finite and infinite spin representations of Poincaré group in six dimensions — 30 + 5 min
- Discussion — 35 min

Break. 12:30-13:30 Moscow Time

Afternoon Session. 13:30 Moscow Time

Chairman: *Arkady Tseytlin (Imperial College London)*

1. Vladimir Kazakov (ENS, Paris)
Dually weighted graphs and 2d quantum gravity — 30 + 5 min
Technical break — 5 min
 2. Alexey Litvinov (Landau Inst. for Theoretical Physics, Moscow)
Integrable structures in CFT and affine Yangians — 30 + 5 min
Technical break — 5 min
 3. Sergey Fedoruk (BLTP JINR, Dubna)
N=2 and N=4 hyperbolic Calogero-Sutherland systems from gauging matrix models — 30 + 5 min
- Discussion — 35 min

Break. 16:00 -17:00 Moscow Time

Evening Session. 17:00 Moscow Time

Chairman: *Augusto Sagnotti (Scuola Normale Superiore, Pisa)*

1. Juan Maldacena (Inst. for Advanced Study, Princeton)
Comments on black holes at the string temperature — 30 + 5 min
Technical break — 5 min
 2. Axel Kleinschmidt (Max Planck Inst. for Gravitational Physics, Potsdam)
E11 exceptional field theory — 30 + 5 min
Technical break — 5 min
 3. Vyacheslav Didenko (Lebedev Physical Inst., Moscow)
On planar solutions in HS theory — 30 + 5 min
- Discussion — 35 min

Friday, June 4

“Integrability, Holography, Higher-Spin Gravity and Strings”

We use Moscow time (GMT+3). The talk times (30+5 min) include 30 min for presentations and 5 min for questions.

Morning Session. 10:00 Moscow Time

Chairman: *Dmitry Kazakov (JINR, Dubna)*

1. Irina Aref'eva (Steklov Math. Inst., Moscow)
Holographic QCD for NICA — 30 + 5 min
Technical break — 5 min
 2. Oleg Andreev (Landau Inst. for Theoretical Physics, Moscow & Munich U., ASC)
Is the string breaking distance in QCD universal? — 30 + 5 min
Technical break — 5 min
 3. Gregory Korchemsky (IPhT, Saclay)
Symmetries of energy flow operators — 30 + 5 min
- Discussion — 35 min

Break. 12:30-13:30 Moscow Time

Afternoon Session. 13:30 Moscow Time

Chairman: *Gregory Korchemsky (IPhT, Saclay)*

1. Gleb Arutyunov (Hamburg U.)
New integrable coset sigma models — 30 + 5 min
Technical break — 5 min
 2. Arkady Tseytlin (Imperial College London)
Integrability and RG flow in 2d sigma models — 30 + 5 min
Technical break — 5 min
 3. Konstantin Zarembo (Nordita, Stockholm)
Integrability in defect CFT — 30 + 5 min
- Discussion — 35 min

Break. 16:00 -17:00 Moscow Time

Evening Session. 17:00 Moscow Time

Chairman: *Evgeny Ivanov (BLTP JINR, Dubna)*

1. Dmitri Sorokin (INFN, Padua)
ModMax and Others — 30 + 5 min
Technical break — 5 min
2. Nicolas Boulanger (UMH, Mons)
Exotic duality and higher-spin — 30 + 5 min
Technical break — 5 min
3. Igor Bandos (Basque U., Bilbao)
*On polarized scattering equation for amplitudes of 10D SYM and
11D supergravity.* — 30 + 5 min

Discussion — 35 min

Friday, June 4

“Quantum Gravity and Cosmology”

We use Moscow time (GMT+3). Talk times (30+15 min) include 30 minutes for presentations and 15 min for discussions and possible technical issues.

Morning Session. 10:45 Moscow Time

Chairman: *Neil Turok (U. of Edinburgh)*

1. Andrei Barvinsky (Lebedev Inst. RAS, Moscow)
Opening remarks — 15 min
2. Alexei Starobinsky (Landau Inst. RAS, Moscow)
The mixed R^2 -Higgs inflationary model — 30+15 min
3. Roger Penrose (Oxford U.)
Conformal cyclic cosmology: why quantum gravity does not resolve the space-time singularity issue — 30+15 min
4. Kostas Skenderis (U. of Southampton)
Holographic cosmology and the resolution of the initial singularity — 30+15 min

Break. 13:15-14:30 Moscow Time

Afternoon Session. 14:30 Moscow Time

Chairman: *Dmitry Gal'tsov (Lomonosov Moscow State U.)*

1. Ignatios Antoniadis (LPTHE—CNRS—Sorbonne U., France & KU Leuven)
The cosmological constant in supergravity and string theory — 30+15 min
2. Dmitry Gorbunov (INR RAS, Moscow)
Cosmology with inverse phase transition — 30+15 min
3. Fedor Bezrukov (U. of Manchester)
Reheating in Higgs- R^2 inflation — 30+15 min
4. Sebastian Zell (EPFL, Lausanne)
Einstein-Cartan gravity and Higgs inflation — 30+15 min

Break. 17:30 -18:00 Moscow Time

Evening Session. 18:00 Moscow Time

Chairman: *Valeri Frolov (U. of Alberta)*

5. Andrei Linde (Stanford U.)
Initial conditions for inflation — 30+15 min

6. Ariel Zhitnitsky (U. of British Columbia, Vancouver)
*Vacuum energy of the Universe, large scale magnetic field and
nontrivial topology in Quantum Field Theory* — 30+15 min

Saturday, June 5

“Quantum Gravity and Cosmology”

We use Moscow time (GMT+3). Talk times (30+15 min) include 30 minutes for presentations and 15 min for discussions and possible technical issues.

Morning Session. 10:00 Moscow Time

Chairman: *Richard Woodard (U. of Florida, Gainesville)*

1. Misao Sasaki (Kavli IPMU, Kashiwa & U. of Tokyo)
Primordial black holes — 30+15 min
2. Sergey Ketov (Tokyo Metropolitan U. & Kavli IPMU, Kashiwa)
Formation of primordial black holes after Starobinsky inflation in modified supergravity — 30+15 min
3. Dmitry Levkov (INR RAS, Moscow)
Semiclassical S-matrix and black hole entropy in dilaton gravity — 30+15 min

Break. 12:15-15:00 Moscow Time

Afternoon Session. 15:00 Moscow Time

Chairman: *Viatcheslav Mukhanov (LMU, Munich)*

1. Robert Myers (Perimeter Inst., Waterloo)
Quantum extremal islands made easy — 30+15 min
2. Tom Hartman (Cornell U.)
Replica wormholes and the information paradox — 30+15 min
3. Andrey Shkerin (U. of Minnesota)
Black hole induced false vacuum decay from first principles — 30+15 min

Break. 17:15 -18:00 Moscow Time

Evening Session. 18:00 Moscow Time

Chairman: *Alexander Vilenkin (Tufts U.)*

4. Neil Turok (U. of Edinburgh)
Path integral for gravity — 30+15 min

5. James Hartle (U. of California, Santa Barbara)
The impact of cosmology on quantum mechanics — 30+15 min

6. Sergei Sibiryakov (Perimeter Inst., Waterloo)
Black Holes in Ultraviolet-Complete Horava Gravity — 30+15 min

Sunday, June 6

“Quantum Gravity and Cosmology”

We use Moscow time (GMT+3). Talk times (30+15 min) include 30 minutes for presentations and 15 min for discussions and possible technical issues.

Evening Session. 17:00 Moscow Time

Chairman: *Alexei Starobinsky (Landau Inst. RAS, Moscow)*

1. Markus Aspelmeyer (U. of Vienna & IQOQI)
Quantum tests of (quantum) gravity — 30+15 min
2. Robert Wald (U. of Chicago)
Quantum superposition of massive bodies — 30+15 min
3. William Unruh (UBC, Vancouver)
Frequency interferometry and BEC measurement of acceleration radiation — 30+15 min
4. Philip Stamp (Pacific Inst. of Theoretical Physics & U. of British Columbia, Vancouver)
Correlated worldline theory of quantum gravity — 30+15 min

Monday, June 7

“Quantum Gravity and Cosmology”

We use Moscow time (GMT+3). Talk times (30+15 min) include 30 minutes for presentations and 15 min for discussions and possible technical issues.

Morning Session. 10:00 Moscow Time

Chairman: *Kostas Skenderis (U. of Southampton)*

1. Mikhail Shaposhnikov (EPFL, Lausanne)
Conformal symmetry: towards the link between the Fermi and the Planck scales — 30+15 min
2. Valeri Rubakov (INR RAS, Moscow)
Non-singular cosmological models with strong gravity in the past — 30+15 min
3. Alexander Kamenshchik (U. of Bologna & Landau Inst. RAS, Moscow)
Renormalization group inspired autonomous equations for secular effects in de Sitter space — 30+15 min
4. Korumilli Sravan Kumar (Tokyo Inst. of Technology)
Non-local R^2 -like inflation, gravitational waves and non-gaussianities — 30+15 min

Break. 13:00-14:00 Moscow Time

Afternoon Session. 14:00 Moscow Time

Chairman: *Alexander Kamenshchik (U. of Bologna & Landau Inst. RAS, Moscow)*

1. Tim Morris (U. of Southampton)
A perturbative continuum limit for quantum gravity — 30+15 min
2. Frank Saueressig (Radboud U., Nijmegen)
Form factors in quantum gravity — 30+15 min
3. Alexei Koshelev (U. da Beira Interior, Covilha)
Quantizing the analytic infinite derivative gravity theory: propagator and unitarity — 30+15 min

Monday, June 7

4. Sergey Solodukhin (U. de Tours)
Quantum gravity, RG equations and the recurrence pole relations — 30+15 min

Break. 17:00 -18:00 Moscow Time

Evening Session. 18:00 Moscow Time

Chairman: *Robert Wald (U. of Chicago)*

5. Valeri Frolov (U. of Alberta)
Black holes in a limiting curvature theory of gravity — 30+15 min
6. Renata Kallosh (Stanford U.)
Quantization of gravity in the black hole background — 30+15 min

Monday, June 7

“New Physics at the Intensity Frontier”

We use Moscow time (GMT+3). Talk times (25+5 min) include 25 minutes for presentations and 5 min for discussions and possible technical issues.

Afternoon Session. 13:00 Moscow Time

Chairman: *Yury Kudenko (INR RAS, Moscow)*

1. Gaia Lanfranchi (LNF-INFN, Frascati)
The search for feebly-interacting particles in the new Physics Beyond Colliders activity — 25+5 min
2. Mikhail Kirsanov (INR RAS, Moscow)
Recent results and plans of the NA64 experiment at the CERN SPS — 25+5 min
3. Evgueni Goudzovski (Birmingham U.)
The NA62 experiment at CERN: recent results and prospects — 25+5 min
4. Igor Krasnov (INR RAS, Moscow)
Constraints on light scalars from PS191 results — 25+5 min

Break. 15:00 -17:00 Moscow Time

Evening Session. 17:00 Moscow Time

Chairman: *Oleg Ruchayskiy (Bohr Inst., Copenhagen & IPT, Lausanne)*

5. Sergey Suvorov (LPNHE (CNRS/IN2P3), Paris) & INR RAS, Moscow)
Double-Hit Signature of Millicharged Particles in 3D segmented neutrino detector — 25+5 min
6. Alexander Monin (EPFL, Lausanne, LPTP)
Hadronic decays of a light Higgs-like scalar — 25+5 min
7. Abigail Keats (U. of Manchester)
Light inflaton model in a metastable Universe — 25+5 min
8. Maxim Pospelov (Perimeter Inst., Ontario)
Light Beyond-SM particles in K-meson decays — 25+5 min
9. Nobuchika Okada (U. Alabama, Tuscaloosa)
Gauged U(1) extended Standard Model and long-lived new particle searches — 25+5 min

Monday, June 7

“New Physics at the Intensity Frontier”

We use Moscow time (GMT+3). Talk times (25+5 min) include 25 minutes for presentations and 5 min for discussions and possible technical issues.

Afternoon Session. 13:00 Moscow Time

Chairman: *Yury Kudenko (INR RAS, Moscow)*

1. Gaia Lanfranchi (LNF-INFN, Frascati)
The search for feebly-interacting particles in the new Physics Beyond Colliders activity — 25+5 min
2. Mikhail Kirsanov (INR RAS, Moscow)
Recent results and plans of the NA64 experiment at the CERN SPS — 25+5 min
3. Evgueni Goudzovski (Birmingham U.)
The NA62 experiment at CERN: recent results and prospects — 25+5 min
4. Igor Krasnov (INR RAS, Moscow)
Constraints on light scalars from PS191 results — 25+5 min

Break. 15:00 -17:00 Moscow Time

Evening Session. 17:00 Moscow Time

Chairman: *Oleg Ruchayskiy (Bohr Inst., Copenhagen & IPT, Lausanne)*

5. Sergey Suvorov (LPNHE (CNRS/IN2P3), Paris) & INR RAS, Moscow)
Double-Hit Signature of Millicharged Particles in 3D segmented neutrino detector — 25+5 min
6. Alexander Monin (EPFL, Lausanne, LPTP)
Hadronic decays of a light Higgs-like scalar (TBC) — 25+5 min
7. Abigail Keats (U. of Manchester)
Light inflaton model in a metastable Universe — 25+5 min
8. Maxim Pospelov (Perimeter Inst., Ontario)
Multi-lepton signatures of meson decays in models with light BSM particles — 25+5 min
9. Nobuchika Okada (U. Alabama, Tuscaloosa)
Gauged U(1) extended Standard Model and long-lived new particle searches — 25+5 min

Tuesday, June 8

“Quantum Gravity and Cosmology”

We use Moscow time (GMT+3). Talk times (30+15 min) include 30 minutes for presentations and 15 min for discussions and possible technical issues.

Morning Session. 10:00 Moscow Time

Chairman: *Misao Sasaki (Kavli IPMU, Kashiwa & U. of Tokyo)*

1. Richard Woodard (U. of Florida, Gainesville)
How inflationary gravitons affect gravitational radiation and the force of gravity — 30+15 min
2. Luca Buoninfante (Tokyo Inst. of Technology)
Towards a ghost-free theory of quantum gravity — 30+15 min
3. David Langlois (APC, Paris)
Black hole perturbations in modified gravity — 30+15 min
4. Cedric Deffayet (CNRS IAP & IHES, Paris)
Domain walls without a potential — 30+15 min

Break. 13:00-15:00 Moscow Time

Afternoon Session. 15:00 Moscow Time

Chairman: *David Langlois (APC, Paris)*

1. Viatcheslav Mukhanov (LMU, Munich)
Instantons with quantum core — 30+15 min
2. Dmitry Gal'tsov (Lomonosov Moscow State U.)
co-authors: Gerard Clement (LAPTH, Annecy) & Igor Bogush (Moscow State U.)
Smarr formulas and rod structure — 30+15 min
3. Alexander Vikman (CEICO, Inst. of Physics, Prague)
Global dynamics for Newton and Planck — 30+15 min
4. Alexander Zakharov (ITEP, Moscow)
Shadows around at the Galactic Center and at M87 as a tool to test gravity theories* — 30+15 min

Tuesday, June 8

“New Physics at the Intensity Frontier”

We use Moscow time (GMT+3). Talk times (25+5 min) include 25 minutes for presentations and 5 min for discussions and possible technical issues.

Afternoon Session. 13:00 Moscow Time

Chairman: *Alexey Boyarsky (Leiden U. & CERN)*

1. Marco Drewes (Catholic U. of Louvain)
A Heavy Metal Path to New Physics — 25+5 min
2. Frank Deppisch (U. College London)
Searches for Sterile Neutrinos — 25+5 min
3. Maksym Ovchinnikov (Leiden U.)
SHiP and searches for new physics — 25+5 min
4. Vladimir Vava Gligorov (CNRS/IN2P3, Paris)
Status and prospects of the CODEX-b detector — 25+5 min

Break. 15:00 -17:00 Moscow Time

Evening Session. 17:00 Moscow Time

Chairman: *Inar Timiryasov (EPFL, Lausanne)*

1. Oleg Brandt (Cambridge U.)
AN Underground Belayed In-Shaft (ANUBIS) experiment to search for long-lived particles using LHC service shafts at CERN — 25+5 min
2. David Curtin (Toronto U.)
MATHUSLA LLP Detector Proposal: Current Status and Prospects — 25+5 min
3. Dmitry Kalashnikov (Moscow Inst. of Physics and Technology)
Predictions on goldstino searches at FASER — 25+5 min
4. Jonathan Feng (U. of California, Irvine)
FASER and the Forward Physics Facility — 25+5 min

Break. 19:00 -19:10 Moscow Time

Discussion — 30 min

Tuesday, June 8

“Advanced Computing in Particle Physics”

We use Moscow time (GMT+3). Talk times include 5 min intervals for discussions.

Evening Session. 15:00 Moscow Time

Chairman: *Alexander Nozik (Moscow Inst. of Physics and Technology)*

1. Roland Grinis (Moscow Inst. of Physics and Technology & GrinisRIT, Moscow)
Differentiable programming for particle physics simulations — 120 min
2. Denis Derkach (HSE, Moscow)
Machine learning methods used for data analysis at LHC — 30+5 min
3. Jonas Glombitza (RWTH Aachen U.)
Deep learning-based algorithms in astroparticle physics — 30+5 min
4. Ivan Kharuk (INR RAS, Moscow)
UHECR Mass Composition Reconstruction using deep learning in Telescope Array Surface Array Detector — 20+5 min
5. Oleg Kalashev (INR RAS, Moscow)
Testing UHECR origin hypotheses using deep learning — 20+5 min

Wednesday, June 9

“Advanced Computing in Particle Physics”

We use Moscow time (GMT+3). Talk times include 5 min intervals for discussions.

Evening session. 14:30 Moscow Time

Chairman: *Oleg Kalashev (INR RAS, Moscow)*

1. Aleksei Tanashkin (Far Eastern Federal U., Vladivostok)
Nonlocal Potts model on random lattice and chromatic number of the plane — 20+5 min
2. Oliver Schulz (MPI for Physics, Munich)
An introduction to Julia language — 120 min
3. Oliver Schulz (MPI for Physics, Munich)
Bayesian analysis toolkit — 20+5 min
4. Alexander Nozik (Moscow Inst. of Physics and Technology)
Scientific visualization libraries in Kotlin Multiplatform — 20+5 min
5. Artem Maevsky (HSE, Moscow)
Generative Modeling for HEP — 20+5 min
6. Alexey Boldyrev (HSE, Moscow)
Machine-learning Optimized Design of Experiments — 20+5 min

Wednesday, June 9

“Modification of Gravity: Theories and Observations”

We use Moscow time (GMT+3). Talk times (30+10 min) include 30 minutes for presentations and 10 min for discussions and possible technical issues.

Morning Session. 10:45 Moscow Time

Chairman: *Eugeniy Babichev*

1. Valery Rubakov (INR RAS, Moscow)
Opening — 15 min
2. Shinji Mukohyama (Yukawa Inst. & Kyoto U.)
Minimalism in modified gravity — 30+10 min
3. Victoria Volkova (INR RAS, Moscow)
Superluminality in DHOST theories with extra matter — 30+10 min
4. Alexander Vikman (CEICO, Inst. of Physics, Prague)
Mimetic Mix — 30+10 min
5. Vasilisa Nikiforova (IHES, Paris)
Torsion bigravity: a purely geometric modified theory of gravity — 30+10 min
6. Tsutomu Kobayashi (Rikkyo U., Tokyo)
Perturbations of black holes in shift-symmetric scalar-tensor theories — 30+10 min

Break. 14:20-16:00 Moscow Time

Evening session. 16:00 Moscow Time

Chairman: *Mikhail Volkov*

1. Takahiro Tanaka (Kyoto U.)
Testing modified gravity using gravitational wave observations — 30+10 min
2. Ed Porter (APC, Paris)
Fundamental physics and cosmology after the second LIGO-Virgo GW catalog — 30+10 min
3. Paolo Creminelli (ICTP, Trieste)
Dark Energy and GW observations — 30+10 min

Thursday, June 10

“Modification of Gravity: Theories and Observations”

We use Moscow time (GMT+3). Talk times (30+10 min) include 30 minutes for presentations and 10 min for discussions and possible technical issues.

Morning Session. 11:00 Moscow Time

Chairman: *Masahide Yamaguchi*

1. Paolo Pani (Sapienza U., Rome)
New physics on the horizon? Recent developments and challenges in tests of dark compact objects — 30+10 min
2. Thomas Sotiriou (U. of Nottingham)
Black hole scalarization — 30+10 min
3. Enrico Trincherini (Scuola Normale Superiore, Pisa)
One, no one, and one hundred thousand: hairy black holes in shift symmetric theories — 30+10 min
4. Mikhail Volkov (Inst. Denis Poisson & U. of Tours)
Asymptotically flat hairy black holes in massive bigravity — 30+10 min
5. Sergei Mironov (INR RAS, Moscow)
Almost stable wormhole in beyond Horndeski theory — 30+10 min

Break. 14:20-16:00 Moscow Time

Evening session. 16:00 Moscow Time

Chairman: *Paolo Creminelli*

1. David Langlois (APC, Paris)
Black holes perturbations in modified gravity — 30+10 min
2. Alexander Zakharov (NRC “Kurchatov Institute” — ITEP, Moscow)
Trajectories of bright stars near the Galactic Center as a tool to test gravity theories — 30+10 min
3. Timothy Anson (IJCLab, Orsay)
Deformed Black Hole in Sgr A — 30+10 min
4. Emanuele Berti (Johns Hopkins U., Baltimore)
Testing the Kerr paradigm — 30+10 min

Friday, June 11

“Modification of Gravity: Theories and Observations”

We use Moscow time (GMT+3). Talk times (30+10 min) include 30 minutes for presentations and 10 min for discussions and possible technical issues.

Morning session. 11:00 Moscow Time

Chairman: *David Langlois*

1. David Mota (U. of Oslo)
Modified gravity Imprints in galaxy clusters
(the talk didn't take place as the speaker had fallen ill) — 30+10 min
2. Shinji Tsujikawa (Waseda U., Tokyo)
Weak gravity in dark energy with energy and momentum couplings — 30+10 min
3. Yong Cai (Zhengzhou U.)
Modified gravity in nonsingular cosmology — 30+10 min
4. Masahide Yamaguchi (Tokyo Inst. of Technology)
Cosmological perturbations in Palatini formalism — 30+10 min

Break. 13:40-16:00 Moscow Time

Evening session. 16:00 Moscow Time

Chairman: *Alexander Vikman*

1. Cedric Deffayet (IAP & IHES, Paris)
Degeneracy, matter coupling and disformal transformations in scalar-tensor theories — 30+10 min
2. Sergey Vernov (Skobeltsyn Inst. of Nuclear Physics, MSU)
Construction of inflationary models with the Gauss-Bonnet term — 30+10 min
3. Yulia Ageeva (Lomonosov Moscow State U.)
Genesis and bounce in Horndeski theories: strong gravity in the past — 30+10 min

Tuesday, June 22

“Dark Matter”

We use Moscow time (GMT+3). Talk times (30+10 min) include 30 minutes for presentations and 10 min for discussions and possible technical issues.

Morning Session. 11:00 Moscow Time

Chairman: *Valery Rubakov (INR RAS, Moscow)*

1. Valery Rubakov (INR RAS, Moscow)
Opening remarks — 10 min
2. Julien Lesgourgues (RWTH Aachen U.)
Could cosmological tensions hint at non-standard DM properties? — 30+10 min
3. Martti Raidal (NICPB, Tallinn)
Higher-spin Dark Matter — 30+10 min
4. Andreas Ringwald (DESY, Hamburg)
Status and Prospects of Axion Experiments at DESY — 30+10 min

Break. 13:10-16:30 Moscow Time

Afternoon Session. 16:30 Moscow Time

Chairman: *Grigory Rubtsov (INR RAS, Moscow)*

1. David Marsh (King’s College London)
The meV/THz QCD Axion — 30+10 min
2. Ariel Zhitnitsky (U. of British Columbia, Vancouver)
Telescope Array bursts and ANITA anomalous events as manifestation of the Dark Matter — 30+10 min
3. Mauro Valli (U. of California, Irvine)
Astrophysical Signatures of Self-Interacting DM — 30+10 min

Wednesday, June 23

“Dark Matter”

We use Moscow time (GMT+3). Talk times (30+10 min) include 30 minutes for presentations and 10 min for discussions and possible technical issues.

Morning Session. 11:00 Moscow Time

Chairman: *Chris Kouvaris (National Technical U. of Athens)*

1. Alexander Dolgov (Novosibirsk State U.)
Antistars in the Galaxy — 30+10 min
2. Zurab Berezhiani (U. L'Aquila & LNGS, L'Aquila)
Mirror Matter: Astrophysical implications — 30+10 min
3. Inar Timiryasov (EPFL, Lausanne)
Einstein-Cartan Portal to Dark Matter — 30+10 min

Break. 13:00-15:00 Moscow Time

Afternoon Session. 15:00 Moscow Time

Chairman: *Dmitry Gorbunov (INR RAS, Moscow)*

1. Chris Kouvaris (National Technical U. of Athens)
Primordial Black Holes from an Early Matter Phase — 30+10 min
2. Antonio Riotto (U. of Geneva)
Primordial NanoBlackHoles — 30+10 min
3. Malcolm Fairbairn (King's College London)
Astrophysical Probes of Dark Matter — 30+10 min
4. Yacine Ali-Haïmoud (New York U.)
Probing interacting dark matter and accreting primordial black holes with the CMB — 30+10 min

Thursday, June 24

“Dark Matter”

We use Moscow time (GMT+3). Talk times (30+10 min) include 30 minutes for presentations and 10 min for discussions and possible technical issues.

Morning Session. 11:00 Moscow Time

Chairman: *Andreas Ringwald (DESY, Hamburg)*

1. Jens Niemeyer (U. of Gottingen)
Structure formation with nonrelativistic scalar fields — 30+10 min
2. Javier Redondo (Zaragoza U.)
Axion Dark Matter Simulations — 30+10 min
3. David Ellis (U. of Gottingen)
Understanding Axion Minichusters: Formation and observational signatures — 30+10 min

Break. 13:00-15:00 Moscow Time

Afternoon Session. 15:00 Moscow Time

Chairman: *Javier Redondo (Zaragoza U.)*

1. Joshua Eby (Kavli IPMU, Kashiwa)
Searching for Axion Stars with Large Decay Constants — 30+10 min
2. Dmitry Levkov (INR RAS, Moscow & ITMP MSU, Moscow)
Instability of rotating Bose stars — 30+10 min
3. Anton Sokolov (DESY, Hamburg)
Photophilic hadronic axion from heavy magnetic monopoles — 30+10 min
4. Mark Hertzberg (Tufts U.)
Aspects of superfluid and quantum dark matter — 30+10 min