

QUARKS ONLINE WORKSHOPS-2021

“Advanced Computing in Particle Physics”

online, June 8 — 9, 2021.

Program

Moscow, 2021

Tuesday, June 8

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

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.