

QUARKS ONLINE WORKSHOPS-2021
“Modification of Gravity: Theories and Observations”
online, June 9 — 11, 2021.

Program

Moscow, 2021

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.

Wednesday, June 9

Morning Session. 10:45 Moscow Time

Chairman: *Eugeny 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.

Lunch. 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

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.

Lunch. 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

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.

Lunch. 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.