

PROGRAM OF THE CONFERENCE

Wednesday, September 21

12:00–13:00 Registration

13:00–13:20 Opening (Michal Krížek)

Chair: Michal Krížek

13:20–14:10 **André Maeder**, New perspectives in the Scale Invariant Vacuum theory

14:10–15:00 **Václav Vavryčuk**, Expansion of the Universe and the cosmological redshift

15:00–15:30 **Martín López-Corredoira**, Fundamental ideas in cosmology. Scientific, philosophical and sociological critical perspectives

15:30–16:00 Coffee Break

Chair: André Maeder

16:00–16:30 **Elena Asencio**, El Gordo: a massive blow to Λ CDM cosmology

16:30–17:00 **Ana Luisa González-Morán**, Determination of the local value of Hubble constant and cosmological constraints with local giant HII regions and high-redshift HII galaxies

17:00–17:20 **Roberto A. Capuzzo Dolcetta, Giovanni Carraro**, A possible alternative to dark matter on galactic scales

17:20–18:00 **Pavel Kroupa**, The formation of super-massive black holes in the early Universe

Thursday, September 22

Chair: Tuomo Suntola

9:00–9:45 **John C. Botke**, A different cosmology

9:45–10:15 **Asher Yahalom**, The weak field approximation of general relativity, retardation, and the problem of precession of the perihelion for Mercury

10:15–10:45 Coffee Break

Chair: Martín López-Corredoira

10:45–11:15 **Heikki Sipilä**, Recalculation of the Moon retreat velocity supports expansion of gravitationally bound local systems

11:15–11:45 **Tuomo Suntola**, In a holistic perspective everything in space is interconnected

11:45–12:05 **Joerg Dabringhausen**, The integrated galaxy-wide stellar initial mass function over the radial acceleration range of early-type galaxies

12:05–14:00 Lunch Break

Chair: Moritz Haslbauer

14:00–14:30 **Martín López-Corredoira, José Ignacio Calvo-Torel**, Fitting of supernovae without dark energy

14:30–15:00 **Itzhak Goldman**, Neutron stars constraints on a late transition of the gravitational constant

15:00–15:30 **Ahmad Hujeirat**, Why the energy density in our universe must be upper-limited? – observations confront theory

15:30–16:00 Conference photo - Coffee Break

Chair: Václav Vavryčuk

16:00–16:30 **Moritz Haslbauer**, The KBC void and Hubble tension in Λ CDM and Milgromian dynamics

16:30–17:00 **Luboš Neslušan**, A demonstration of the difference between the normalized and non-limited solutions of the field equations in the modeling of relativistic compact objects

17:00–17:30 **Xavier Hernandez**, A covariant description of local gravitational anomalies and its cosmological implications

Friday, September 23

Chair: Heikki Sipilä

9:00–9:30 **Klaus Morawetz**, Consistent solution of Einstein-Cartan equations with torsion outside matter – consequences for dark matter

9:30–10:00 **Juan De Vicente**, A comprehensible view of the Hubble tension

10:00–10:30 **Václav Vavryčuk**, Physical properties of the conformal FLRW metric

10:30–11:00 Coffee Break

Chair: Luboš Neslušan

11:00–11:40 **Charles J. Sven**, Evidence of dark energy using 3D physics

11:40–12:00 **Čestmír Hradečný**, Cosmology model with positive gravitational potential energy

12:00–14:00 Lunch Break

Chair: Asher Yahalom

14:00–14:30 **Vesselin G. Gueorguiev**, An alternative explanation of the orbital expansion of Titan and other bodies in the Solar system

14:30–14:50 **Pengfei Li**, A quasi-static Universe

14:50–15:10 **Nikolaos Samaras**, Cosmological simulations with Milgromian dynamics

15:10–15:30 **Frederic Lassiaille**, Discrete relativity: current status of the research

15:30–16:00 Coffee Break

Chair: Pavel Kroupa

16:00–16:30 **Yurii V. Dumin**, Lambda-instability of Keplerian orbits and the problem of hypervelocity stars (ZOOM presentation)

16:30–17:00 **Kirill A. Bronnikov**, Wormholes in a Friedmann universe (ZOOM presentation)

17:00–17:30 **Alexei Starobinsky**, Inflationary models with large peaks in primordial perturbation spectra at small scales (ZOOM presentation)

17:30–18:00 **Michal Křížek**, 100 years of the Friedmann equation

Saturday, September 24

9:00–12:00 Excursion to the astronomical and cosmological sights of Prague guided by **Michal Křížek** (total length about 6 km):

In the footsteps of Albert Einstein in Prague

We will meet at 9:00 in front of the main gate of the Institute of Mathematics at Žitná 25. **Please, don't forget your umbrellas!!!**