

CONFERENCE PROGRAM

Wednesday, September 26

8:00–9:00 Registration

9:00–9:10 Opening

9:10–9:15 **Michal Křížek**, Laudation to Professor Lawrence Somer on his 70th birthday

Chair: Michal Křížek

9:15–10:00 **Pavel Kroupa**, Modern progress in understanding the astrophysics of galaxies

10:00–10:45 **Igor Karachentsev, Ksenia Telikova**, Stellar and dark matter density in the local universe

10:45–11:15 Coffee Break

Chair: Alessandro D. A. M. Spallicci

11:15–11:40 **Marcel S. Pawlowski**, Structures in the phase-space distribution of satellite galaxies as challenges to the LCDM model

11:40–12:00 **Sohyun Park**, Nonlocal gravity for dark energy and/or dark matter

12:00–14:00 Lunch Break

Chair: Lawrence Somer

14:00–14:45 **Federico Lelli**, The empirical laws of galactic rotation

14:45–15:30 **Itzhak Goldman**, Primordial cosmic turbulence: generation and implications

15:30–15:50 **Wolfgang Oehm**, Constraints on the existence of dark matter haloes by the M81 group and the Hickson compact groups of galaxies

15:50–16:20 Coffee Break

Chair: Itzhak Goldman

16:20–16:40 **Michal Křížek**, Ten arguments against the proclaimed amount of dark matter

16:40–17:00 **Moritz Haslbauer**, Galaxies lacking dark matter in the Illustris simulation

17:00–17:20 **Yurii V. Dumin**, Can the dark-matter deficit in the high-redshift galaxies explain the persistent discrepancy of Hubble constants?

17:20–17:40 **Michael Feldman**, Pushing PPN

17:40–18:00 **Eric J. Lerner**, Observations in multiple data sets vs concordance cosmology

Thursday, September 27

Chair: André Maeder

9:00–9:45 **Alexei A. Starobinsky**, Inflationary models: present status and future perspectives

9:45–10:30 **Salvador J. Robles-Perez**, Effects of inter-universal entanglement on the state of the early universe

10:30–11:00 Coffee Break

Chair: Alexei A. Starobinsky

11:00–11:20 **Klaus Morawetz**, Bose condensation of weakly interacting mass-LESS particle

11:20–11:40 **Yurii V. Dumin**, Cosmological inflation from the quantum-mechanical uncertainty relation

11:40–11:55 **Radoslaw Jan Wojtak**, Observational constraints on redshift remapping and its correspondence to conformally Friedmann-Lemaître-Robertson-Walker cosmologies

11:55–12:00 **Attila Mészáros**, Classification of distances in cosmology

12:00–12:15 **CONFERENCE PHOTO**

12:15–14:00 Lunch Break

Chair: Yurii V. Dumin

14:00–14:45 **Benoit Famaey**, Alternatives to CDM in the light of the mass discrepancy-acceleration relation

14:45–15:30 **Martín López-Corredoira**, Problems with the dark matter and dark energy hypotheses, and alternative ideas

15:30–16:00 **Lidia Makarova**, Dwarf satellites in the Local Universe: insights to the cosmology

16:00–16:30 **Dmitry Makarov**, Multiparametric Tully-Fisher relation for late type edge-on galaxies

16:30–17:00 Coffee Break

Chair: Michal Krížek

17:00–18:00 **André Maeder**, Glaciers, geysers, dry rivers, volcanoes on Mars. Was there a beginning of life? (**Public lecture**)

Friday, September 28

Chair: Pavel Kroupa

9:00–9:45 **Alessandro D. A. M. Spallicci**, Perspectives for astrophysics and cosmology from non-Maxwellian light

9:45–10:30 **Lukasz Bratek**, Lower bound estimates for the Milky Way mass from various observables

10:30–11:00 Coffee Break

Chair: Lidia Makarova

11:00–12:00 **André Maeder**, Scale invariant theory and dark matter, observational tests

12:00–12:15 **Rajendra Gupta**, Determination of the Mach effect contribution to the redshift

12:15–14:00 Lunch Break

Chair: Dmitry Makarov

14:00–14:45 **Stacy McGaugh**, Cosmic signatures of scale-invariant dynamics

14:45–15:15 **Oleg Tsupko**, Analytical investigation of black hole shadow

15:15–15:30 **Olga Kashibadze**, Kinematic study of the local supercluster plane

15:30–15:45 **Pavel Voráček**, Possible common solution to the problems of dark energy and dark matter in the Universe

15:45–16:00 **Frederic Lassiaille**, Surrounding matter theory

16:00–16:15 **Chemseddine Ananna**, Local expansion of the universe

Saturday, September 29

9:00–12:00 Excursion to the astronomical and cosmological sights of Prague guided by **Michal Křížek**. We will meet at 9:00 in front of the main gate of the Institute of Mathematics at Žitná 25.