

The 6th Conference of the Polish Society on Relativity



Monday, September 23, 2019 - Thursday, September 26, 2019

Other Institutes

Scientific Program

The program of the conference will contain 4 plenary morning sessions (Monday, Tuesday, Wednesday, and Friday) and 3 afternoon parallel sessions (Monday, Tuesday, and Thursday).

On Thursday morning a special "Doctoral Students Parallel Workshop" will be held.

The last day of the conference will contain the afternoon plenary session which will be devoted to philosophical aspects of fundamental cosmology. The excursion is planned for Wednesday afternoon.

It is planned:

15 plenary talks of 60 mins (including questions)

4 plenary philosophy talks of 40 mins

72 parallel sessions talks of 20 mins (3 parallel sessions each day)

36 doctoral talks of 20 mins (3 parallel sessions)

In total 128 talks.

There will also be a poster session if the number of abstracts will be above the talk time capabilities. The oral presentations will be selected by the sessions conveners in collaboration with the Scientific Committee.

The public talk is planned for Tuesday evening.

Welcome reception is planned for Monday evening and the conference dinner is planned for Thursday evening.

There will also be a poster session if the number of abstracts will be above our talk time capabilities. The oral presentations will be selected (up to max. 20) by the Scientific Committee.

A more detailed plan can be accessed by clicking [here](#).

Plenary Sessions

S. Capozziello "Cosmography as a tool to discriminate between modified gravity and dark energy"

Joseph Conlon "String Compactifications and the Swampland"

Jan de Boer "Gravity and quantum information"

Jacques Delabrouille "Constraining gravitation with CMB observations"

Jose Antonio Font "Universal relations for gravitational-wave asteroseismology of proto-neutron stars"

Yongge Ma "Loop quantum scalar-tensor gravity and its cosmological implication"

Hermann Nicolai "K(E10) and Standard Model Physics"

Tsvi Piran "Lessons from GW170817, what did we see, what caused it and what can we expect in the coming future"

Jorge Pullin "Loop quantum gravity: developments and recent results"

Vivien Raymond "Gravitational Waves Observations by LIGO and Virgo"

Masaru Shibata "Merger and mass ejection for neutron star binaries"

Massimo Tinto “Space-based gravitational wave observations in the mid-band frequency region”

Selected Talks

- K. Bolejko “Searching for non-Riemannian signatures in cosmological data”
- A. Janiuk “Magnetized jets launched from accreting black holes after the neutron star merger”
- I. Kanatchikov “On the precanonical structure of the Schroedinger wave functional in curved space-time”
- T. Lee “Canonical quantization of massive symmetric rank-two tensor in string theory”
- S. Robles-Perez “Quantum creation of a universe-antiuniverse pair”

Student's talks

- B. Kiczek “ Holographic SQUID and detection of dark matter”
- P. Klimasara “Topologically supported cosmological constant”
- M. Kolanowski “Anti-evaporation of Schwarzschild-deSitter black hole revisited”
- J. Lankinen “Decaying massive scalar in the early universe”
- A. Miroszewski „Quantum Big-Bounce scenario and primordial gravitational waves”
- S. Naqvi „Gravitational wave memory effect”
- A. Nilsson “Antisymmetric tensors in Friedmann cosmology”
- F. Wagner “Uncertainty in the presence of horizons”

Parallel Sessions

- V. Ambrus „Quantum corrections in rigidly-rotating thermal states on anti-deSitter space”
- M. Artymowski „Simple SUGRA inflation”
- A. Chudecki „Conformally recurrent heavenly spaces”
- B. Cuadros-Melger „Instability of aRNAdS black hole under perturbations of a scalar field coupled to Einstein tensor”
- D. Dobkowski-Ryłko “The solution to the Petrov type D equation on the non-trivial bundle topology and its embedability”
- W. Dyba „Modelling general-relativistic disc in OJ287”
- R. Durka „New insight into Taub-NUT spacetime”
- G. Farrugia „Solutions in teleparallel gravity: gravitomagnetism and rotational effects”
- M. Flory „Discrete scale invariance in holography revisited”
- J. Garecki „Riemannian geometry imposed on Friedmann and more general spacetimes”
- J. Gizbert-Studnicki „Quantum gravity on a torus – an update”
- K. Głód „1+1+2 covariant formulation of light propagation in cosmological models”
- W. Kulczycki „Mass, density and circumferential radius in general-relativistic Keplerian disks around black holes”
- R. Konoplya „Black hole mimickers and echoes from compact objects”
- P. Mach „Magnetized self-gravitating tori around black holes”
- P. Małkiewicz „Curvature perturbations in quantum cosmological spacetimes”
- K. Marosek „Strength of singularities in varying constants theories”
- J. Mielczarek “Quantum cosmology with compact phase space”
- A. Nakonieczna „Multidimensional dynamics of the brane-dilaton black hole system”
- Ł. Nakonieczny „Top-down approach to the curved spacetime effective field theory (cEFT) and examples”
- D. Nemeth „Massline and other recent results of CDT quantum gravity”
- M. Ortaggio “Universal black holes”

- J. Ostrowski "Relativistic Lagrangian perturbation theory in spherical symmetry"
- I. Palit „Accretion in a dynamical spacetime and the spinning up of the black hole in collapsars"
- V. Pravda "Static, spherically symmetric black holes in quadratic gravity"
- N. Riahi " On the relation between the canonical Hamilton-Jacobi equation and the De Donder-Weyl Hamilton-Jacobi formulation in general relativity"
- V. Salzano "Breaking the Vainshtein Screening in Clusters of Galaxies"
- S. Sikora „Construction of the cosmological model with periodically distributed dust inhomogeneities with growing amplitude"
- T. Smółka „Conserved quantities related to (3+1) decomposition of CYK tensors"
- A. Suvorov „Perturbations of Kerr metric in modified gravity"
- S. Szybka „Standing gravitational waves"
- J. Toniato "Solar system constraints on polynomial class of Palatini $f(R)$ gravity"
- T. Trzeźniewski "Hopf-algebraic deformations of 3d spacetime symmetries"
- M. Wiatr „Fierz theory vs linear gravity"
- A. Wojnar „Palatini stars"
- D. Yoshida "Spacetime singularities in inflationary universes"