

**6th CONFERENCE OF THE POLISH SOCIETY ON
RELATIVITY – POTOR-6**

And Doctoral Students Workshop in Cosmology

23-26 SEPTEMBER 2019, SZCZECIN, POLAND

MONDAY

23.09.2019

PLENARY TALKS

(room 19, ground floor)

Plenary session I (PI)

Chairman: M. P. Dąbrowski

		Duration [mins]
8 ⁰⁰	Registration at Maritime Academy, Wały Chrobrego 1-2 street	
9 ¹⁵	Conference opening (<i>Room 19, ground floor, right</i>)	15
9 ³⁰	Lecture 1: Massimo Tinto "Space-based gravitational wave observations in the mid-band frequency region"	40+5
10 ¹⁵	Lecture 2: Jacques Delabrouille "Constraining gravitation with CMB observations"	40+5
11 ⁰⁰	<i>Coffee break</i>	30
11 ³⁰	Lecture 3: Jose Antonio Font "Universal relations for gravitational-wave asteroseismology of proto-neutron stars"	40+5
12 ¹⁵	Lecture 4: Masaru Shibata "Merger and mass ejection for neutron star binaries"	40+5
13 ⁰⁰	<i>Lunch</i>	120
15 ⁰⁰	Parallel sessions	190
19 ⁰⁰	<i>Public talk (Tsvi Piran "The origin of gold in the Universe") - Szczercowa street 4, room 7, 1st floor.</i>	60

PARALLEL SESSIONS

Session I (SI) - Classical relativity, compact objects, gravitational waves (room 19)

Chairman: A. Królak

15 ⁰⁰	R. Konoplya „Black hole mimickers and echoes from compact objects”	15+5
15 ²⁰	S. Szybka „Standing gravitational waves”	15+5
15 ⁴⁰	J. Ostrowski “Relativistic Lagrangian perturbation theory in spherical symmetry”	15+5
16 ⁰⁰	B. Cuadros-Melger „Instability of a RNAdS black hole under perturbations of a scalar field coupled to Einstein tensor”	15+5
16 ²⁰	<i>Coffee break</i>	30
16 ⁵⁰	P. Mach „Magnetized self-gravitating tori around black holes”	15+5
17 ¹⁰	T. Smółka „Conserved quantities related to (3+1) decomposition of CYK tensors”	15+5
17 ³⁰	A. Chudecki „Conformally recurrent heavenly spaces”	15+5
19 ⁰⁰	<i>Public talk (Tsvi Piran "The origin of gold in the Universe") - Szczercowa street 4, room 7, 1st floor.</i>	60

Session II (SII) - Quantum gravity, QFT and related topics (room 407)
Chairman: J. Lewandowski

15⁰⁰	V. Ambrus „Quantum corrections in rigidly-rotating thermal states on anti-deSitter space”	15+5
15²⁰	D. Dobkowski-Ryłko “The solution to the Petrov type D equation on the non-trivial bundle topology and its embeddability”	15+5
15⁴⁰	M. Wiatr „Fierz theory vs linear gravity”	15+5
16⁰⁰	Ł. Nakonieczny „Top-down approach to the curved spacetime effective field theory (cEFT) and examples”	15+5
16²⁰	<i>Coffee break</i>	30
16⁵⁰	P. Małkiewicz „Curvature perturbations in quantum cosmological spacetimes”	15+5
17¹⁰	N. Riahi “ On the relation between the canonical Hamilton-Jacobi equation and the De Donder-Weyl Hamilton-Jacobi formulation in general relativity”	15+5
17³⁰	J. Gizbert-Studnicki „Quantum gravity on a torus – an update”	15+5
17⁵⁰	D. Nemeth „Massline and other recent results of CDT quantum gravity”	15+5
19⁰⁰	<i>Public talk (Tsvi Piran “The origin of gold in the Universe”) - Szczerbcowa street 4, room 7, 1st floor.</i>	60

TUESDAY

24.09.2019

PLENARY TALKS

(room 19, ground floor)

Plenary session II (PII)

Chairman: M. Biesiada

9 ⁰⁰	Lecture 5: Jorge Pullin “Loop quantum gravity: developments and recent results”	40+5
9 ⁴⁵	Lecture 6: Joseph Conlon “String Compactifications and the Swampland”	40+5
10 ³⁰	<i>Coffee break</i>	30
11 ⁰⁰	Lecture 7: Jan de Boer “Gravity and quantum information ”	40+5
11 ⁴⁵	Lecture 8: Tsvi Piran “Lessons from GW170817, what did we see, what caused it and what can we expect in the coming future”	40+5
12 ³⁰	Selected talk 1: A. Janiuk “Magnetized jets launched from accreting black holes after the neutron star merger”	25+5
13 ⁰⁰	<i>Lunch</i>	120
15 ⁰⁰	<i>Parallel sessions</i>	130
17 ³⁰	<i>Meeting of the Polish Society on Relativity POTOR</i> (room 19)	120
20 ⁰⁰	<i>Conference Dinner – Restaurant “U Wyszaka”, ks. Mściwoja II, No 8</i>	120

PARALLEL SESSIONS

Session III (SIII) – Testing relativity, astrophysics (room 19)

Chairman: M. Rogatko

15 ⁰⁰	A. Wojnar „Palatini stars”	15+5
15 ²⁰	J. Toniato “Solar system constraints on polynomial class of Palatini f(R) gravity”	15+5
15 ⁴⁰	I. Palit „Accretion in a dynamical spacetime and the spinning up of the black hole in collapsars”	15+5
16 ⁰⁰	W. Dyba „Modelling general-relativistic disc in OJ287”	15+5
16 ²⁰	<i>Coffee break</i>	30
17 ³⁰	<i>Meeting of the Polish Society on Relativity POTOR</i> (room 19)	120
20 ⁰⁰	<i>Conference Dinner – Restaurant “U Wyszaka”, ks. Mściwoja II, No 8</i>	

Session IV (SIV) – Strings, branes, holography (room 407)

Chairman: P. Sulkowski

15 ⁰⁰	M. Artymowski „Simple SUGRA inflation”	15+5
15 ²⁰	T. Trześniewski “Hopf-algebraic deformations of 3d spacetime symmetries”	15+5
15 ⁴⁰	A. Nakonieczna „Multidimensional dynamics of the brane-dilaton black hole system”	15+5

16⁰⁰	M. Flory „Discrete scale invariance in holography revisited”	15+5
16²⁰	<i>Coffee break</i>	
17³⁰	<i>Meeting of the Polish Society on Relativity POTOR</i> (room 19)	120
20⁰⁰	<i>Conference Dinner – Restaurant “U Wyszaka”, ks. Mściwoja II, No 8</i>	

WEDNESDAY

25.09.2019

Doctoral Students Workshop in Cosmology

Session DSW

Convener: V. Salzano

9 ⁰⁰	Lecture 9: S. Capozziello “Cosmography as a tool to discriminate between modified gravity and dark energy”	40+5
9 ⁴⁵	Lecture 10: Hermann Nicolai “K(E10) and Standard Model Physics”	40+5
10 ³⁰	<i>Coffee break</i>	30
11 ⁰⁰	Student's talk 1: B. Kiczek “ Holographic SQUID and detection of dark matter”	15+5
11 ²⁰	Student's talk 2: S. Naqvi „Gravitational wave memory effect”	15+5
11 ⁴⁰	Student's talk 3: P. Klimasara “Topologically supported cosmological constant”	15+5
12 ⁰⁰	Student's talk 4: J. Lankinen “Decaying massive scalar in the early universe”	15+5
12 ²⁰	Student's talk 5: F. Wagner “Extended Quantum Uncertainty in the presence of horizons”	15+5
12 ⁴⁰	Student's talk 6: A. Miroszewski „Quantum Big-Bounce scenario and primordial gravitational waves”	15+5
13 ⁰⁰	<i>Lunch</i>	120
15 ⁰⁰	<i>Parallel sessions</i>	170

PARALLEL SESSIONS

Session V (SV) – Extended gravities (room 407)

Chairman: S. Capozziello

15 ⁰⁰	V. Salzano “Breaking the Vainshtein Screening in Clusters of Galaxies”	15+5
15 ²⁰	A. Suvorov „Perturbations of Kerr metric in modified gravity”	15+5
15 ⁴⁰	V. Pravda “Static, spherically symmetric black holes in quadratic gravity”	15+5
16 ⁰⁰	A. Finch „Solutions in teleparallel gravity: gravitomagnetism and rotational effects”	15+5
16 ²⁰	<i>Coffee break</i>	30
16 ⁵⁰	J. Garecki „Riemannian geometry imposed on Friedmann and more general spacetimes”	15+5
17 ¹⁰	M. Ortaggio “Universal black holes”	15+5
17 ³⁰	W. Kulczycki „Mass, density and circumferential radius in general-relativistic Keplerian disks around black holes”	15+5

Session VI (SVI) - Cosmology (room 19)

Chairman: A. Balcerzak

15⁰⁰	D. Yoshida “Spacetime singularities in inflationary universes”	15+5
15²⁰	J. Mielczarek “Quantum cosmology with compact phase space”	15+5
15⁴⁰	S. Sikora „Construction of the cosmological model with periodically distributed dust inhomogeneities with growing amplitude”	15+5
16⁰⁰	R. Durka „New insight into Taub-NUT spacetime”	15+5
16²⁰	<i>Coffee Break</i>	30
16⁵⁰	K. Głód „1+1+2 covariant formulation of light propagation in cosmological models”	15+5
17¹⁰	K. Marosek „Strength of singularities in varying constants theories ”	15+5

THURSDAY

26.09.2019

PLENARY TALKS

(room 19, ground floor)

Plenary session III (PIII)

Chairman: E. Malec

9⁰⁰	Lecture 11: Raymond Vivien “Gravitational Waves Observations by LIGO and Virgo”	40+5
9⁴⁵	Lecture 12: Yongge Ma “Loop quantum scalar-tensor gravity and its cosmological implication”	40+5
10³⁰	<i>Coffee break</i>	30
11⁰⁰	Selected talk 2: T. Lee “Canonical quantization of massive symmetric rank-two tensor in string theory”	35+5
11⁴⁰	Selected talk 3: I. Kanatchikov “On the precanonical structure of the Schroedinger wave functional in curved space-time”	35+5
12²⁰	Student's talk 7: A. Nilsson “Antisymmetric tensors in Friedmann cosmology”	15+5
12⁴⁰	Student's talk 8: M. Kolanowski “Anti-evaporation of Schwarzschild-deSitter black hole revisited”	15+5
13⁰⁰	<i>Lunch</i>	60
14⁰⁰	Selected talk 4: K. Bolejko “Searching for non-Riemannian signatures in cosmological data”	35+5
14⁴⁰	Selected talk 5: S. Robles-Perez „Quantum creation of a universe-antiuniverse pair”	35+5
15²⁰	<i>Conference closing</i>	10