



28th Texas Symposium on Relativistic Astrophysics

December 13-18, 2015
International Conference Centre Geneva

PROGRAMME

WELCOME TO GENEVA

We warmly welcome you to Geneva for the 28th TEXAS Symposium on Relativistic Astrophysics, organized by the Astronomy Department and the Physics Section of the University of Geneva. The Symposium includes both invited and contributed talks and posters.

Following the tradition of past Texas Symposia, the 2015 edition will cover recent developments in the fields related to relativistic theory of gravitation, cosmology, messengers and high-energy phenomena with parallel sessions on relativity, gravitation, dark matter, dark energy, early Universe, cosmic microwave background, neutrinos, magnetic fields, gravitational waves, gamma-ray bursts, black-holes, X-ray binaries, discs and jets, particle acceleration and future challenges and experiments.

We are thrilled by the engagement of the community for the fields covered by the Texas symposia with more than 500 abstracts submitted from 54 countries and are excited to welcome hundreds of astrophysicists and physicists in Geneva, the home town of the LHC, to review remarkable discoveries and prospects, one century after the publication of General Relativity by Albert Einstein.

We hope that you will enjoy the comfort of the venue, the “Centre international de Conférences Genève” and fully benefit from the rich programme that has been prepared for you.

ENJOY A BEAUTIFUL WEEK IN GENEVA !



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COMMITTEES

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Martin Kunz

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Marc Türler

Roland Walter (co-chair)

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SYMPOSIUM VENUE

All conference rooms are located at the Centre International de Conférences Genève (CICG).

Centre International de Conférences Genève CICG

Rue de Varembe 17
1211 Geneva 20

Tel. + 41 (0)22 791 91 11

The access is facilitated by excellent public transport services. The CICG is situated only 5 km away from the international airport and from the Cornavin main railway station, downtown.

How to reach the CICG

- From Cornavin main railway station:
Tram n°15 (*Palettes*): stop "Nations"
Bus n°5 (*Aéroport*): stop "Vermont"
Bus n°8 (*OMS*): stop "UIT"
- From the international airport:
Bus n°5 (*Thônex-Vallard*): stop "Vermont"
Bus n°28 (*Jardin Botanique*): stop "Nations"

Where to park your car?

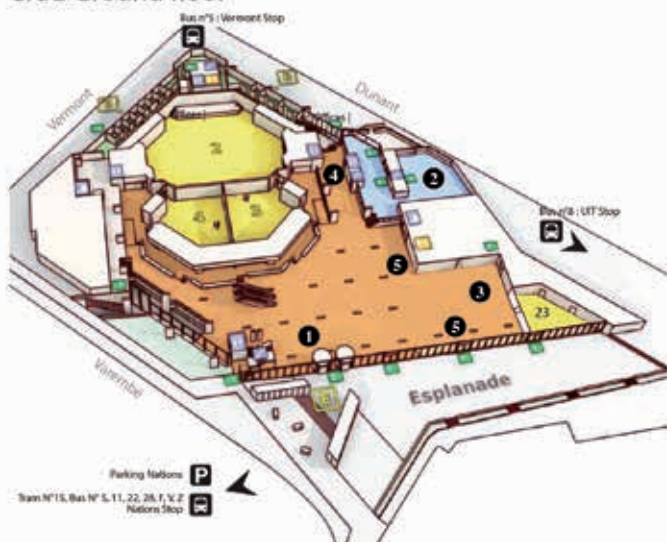
Parking des Nations, Les Genêts, 1202 Genève
(5 min. walking distance to CICG)

CICG situation plan



CICG plan

CICG Ground floor



- 1 Information & Registration
- 2 Speaker Corner
- 3 Poster Area
- 4 Access to level +1, +2, +3
- 5 Coffee Break

- Level 0 Registration, exhibition, poster, speaker corner, bar
Rooms 2 (plenary), 3, 4, 23
- Level 1 Restaurant
- Level 2 Rooms 7+8, 13, 14
- Level -1 Rooms 16, 17

PLENARY TALKS

General Relativity	
First hundred years of GR: successes, status and prospects	Thanu Padmanabhan (Pune)
Experimental tests of general relativity in binary systems	Michael Kramer (Bonn)
Rattle and shine by compact binaries mergers	Luis Lehner (Waterloo)
Exact Solutions in Astrophysics	Mustapha Ishak (Dallas)
Quantum effects on black holes: evaporation, tunnelling, information leak. Anything observable?	Carlo Rovelli (Marseille)

Cosmology	
CMB temperature and polarisation	Nabila Aghanim (Orsay)
CMB spectral distortion	Rashid Sunyaev (Moscow)
Relativistic effects in large-scale structure surveys	Camille Bonvin (CERN)
Dark matter detection – an experimental overview	Laura Baudis (Zurich)
The LHC & the Universe	Gian Giudice (CERN)
The very early universe: observations to fundamental physics	Hiranya Peiris (London)
Dark energy	David Langlois (Paris)

Beyond electromagnetic messengers	
Gravitational waves	Alessandra Buonanno (Berlin)
Space borne gravitational waves	Stefano Vitale (Trento)
Advanced Virgo project	Fulvio Ricci (Rome)
Multiwavelength aspects of cosmic neutrinos	Francis Halzen (Madison)

Relativity At Work	
Black holes and their immediate environment	Andrew Fabian (Cambridge)
Disk and jets	Alexander Tchekhovskoy (Berkeley)
The equation of state of dense matter	Anna Watts (Amsterdam)
Gravity in the strong field regime	Luigi Stella (Rome)
Cosmic rays and their acceleration	Pasquale Blasi (Firenze)
Gamma-ray universe	Jim Hinton (Heidelberg)

PARALLEL SESSIONS

ID	Day	Title	Chair
01	Thu	Numerical relativity	<i>Thomas Baumgarte</i>
02	Mon	Exact solutions, inhomogeneous models and averaging	<i>Mustapha Ishak</i>
03a	Tue	Modifications of gravity	<i>Anne Davis</i>
03b	Wed	"	"
04a	Mon	Dark energy	<i>Martin Kunz</i>
04b	Tue	"	"
05a	Wed	Dark matter	<i>Marco Cirelli</i>
05b	Thu	"	"
06	Mon	Early universe	<i>Daniel Figueroa</i>
07	Mon	Large scale structures	<i>Vincent Desjacques</i>
08	Mon	Cosmic microwave background	<i>Antony Lewis</i>
09	Tue	Cosmic neutrinos	<i>Julien Lesgourgues</i>
10a	Tue	Cosmic magnetic fields: probes	<i>Tina Kahniashvili</i>
10b	Wed	Cosmic magnetic fields: origin, evolution and signatures	"
11a	Wed	Gravitational waves	<i>Chiara Caprini</i>
11b	Thu	"	"
11c	Thu	Gravitational waves: Pulsar timing array	<i>Michael Kramer, Victoria Kaspi</i>
12	Thu	Gravitational lensing	<i>Ludovic Van Waerbeke</i>
13a	Mon	Gamma-ray bursts	<i>Luigi Piro</i>
13b	Tue	"	"
14a	Wed	Disks and jets	<i>Thierry Courvoisier</i>
14b	Thu	"	"
15a	Mon	Binaries: HMXB	<i>Alessandro Papitto</i>
15b	Tue	Binaries: ULX and LMXB	"
15c	Wed	Binaries: Millisecond pulsars	"
16a	Tue	Black holes	<i>Didier Barret</i>
16b	Wed	"	"
17	Thu	Activity at the galactic center	<i>Denys Malyshev</i>
18a	Mon	Gal. accel. and pulsars: Galactic accelerators	<i>Marco Tavani</i>
18b	Tue	Gal. accel. and pulsars: Pulsars	"
19a	Tue	VHE & CR: Blazars and EBL	<i>Teresa Montaruli</i>
19b	Wed	VHE & CR: VHE observations	"
19c	Thu	VHE & CR: CR and astrophysical neutrinos	"
20	Thu	Future challenges and experiments	<i>Bruno Leibundgut</i>

SCIENTIFIC PROGRAM DAY BY DAY

The order of the talks within each parallel session is at the discretion of the session chair and subject to change. Please check at www.isdc.unige.ch/texas2015/

MONDAY, December 14 th	
08:30 - 09:00	Registration
Plenary sessions Room 2, Level 0	
09:00 - 09:07	Introduction, Ruth Durrer & Roland Walter
09:07 - 09:15	Welcome address by the Vice-Rector of the University of Geneva, Jean-Marc Triscone
09:15 - 09:35	Einstein's Swiss Years, Jan Lacki
09:35 - 10:10	First hundred years of GR: successes, status and prospects, Thanu Padmanabhan
10:10 - 10:45	Relativistic effects in large-scale structure surveys, Camille Bonvin
10:45 - 11:20	Coffee break and poster session (Level 0, Lobby)
11:20 - 11:55	CMB temperature and polarisation anisotropies: a goldmine for cosmology., Nabila Aghanim
11:55 - 12:30	CMB spectral distortions, Rashid Sunyaev
12:30 - 14:00	Lunch break (Level 1, Cafeteria)
Session 2 Exact solutions, inhomogeneous models and averaging Room 13, level 2	
14:00 - 14:21	Modelling inhomogeneous cosmologies with Numerical Relativity, Eloisa Bentivegna
14:21 - 14:42	Solving the Einstein-Maxwell Equations for the Dispersive Propagation of Light during Mixmaster Kasner Epochs and other Anisotropic Early-Universe Models, Brett Bochner
14:42 - 15:03	Backreaction of voids in a Friedman background with constant w equation of state, Marco Bruni
15:03 - 15:24	Lense-Thirring precession in strong gravitational fields, Chandrachur Chakraborty
15:24 - 15:45	Inhomogeneous conformally flat models of the universe, Mariusz Dabrowski
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	First-order cosmological perturbations engendered by point-like masses: all scales covered, Maxim Eingorn
16:35 - 16:55	Frames in Quasi-Spherical Szekeres Spacetimes, Charles Hellaby
16:55 - 17:15	On homogeneous and isotropic universe, Mikhail Katanaev
17:15 - 17:35	Covariant Perturbations of the Scalar-Tensor Schwarzschild Black Hole, Geraint Pratten
17:35 - 17:55	Confronting anisotropic cosmological models with real-time cosmology, Wessel Valkenburg

17:55 - 18:45	Discussion session on averaging and backreaction in cosmology, Mustapha Ishak
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Session 4 | Dark energy | Room 14, level 2

14:00 - 14:27	High redshift BAO from BOSS to eBOSS, Timothee Delubac
14:27 - 14:53	Tracing dark energy with quasars., Justyna Średzińska
14:53 - 15:19	Measuring cosmological parameters with GRBs: status and perspectives, Lorenzo Amati
15:19 - 15:45	The m-z relation for type Ia supernovae, locally inhomogeneous cosmological models, and the nature of dark matter, Phillip Helbig
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:40	Using Atom Interferometry to Detect Chameleon Dark Energy, Clare Burrage
16:40 - 17:05	Causality in theories with more than one metric, Ignacy Leonard Sawicki
17:05 - 17:29	Dark energy as a fixed point of the Einstein Yang-Mills Higgs Equations, Massimiliano Rinaldi
17:29 - 17:53	Non-local gravity and comparison with observational datasets, Yves Dirian
17:53 - 18:17	Viability of a quintessence model with inverse power law potential as a dark energy candidate, Erick Jonathan Almaraz Avina
18:17 - 18:20	Constraints on a DE parametrization using BAO and Forecasting for future surveys, Mariana Jaber
18:20 - 18:23	Force sensor for chameleon a candidate for dark energy, Attaallah Almasi
18:23 - 18:26	Exploring the consequences of parameter values in cosmological models with CosmoEJS, an interactive package of cosmology Java simulations, Jacob Moldenhauer
18:26 - 18:29	Testing the dark sector interaction by using the isolated galaxy pairs from SDSS DR10, Hanwool Koo
18:29 - 18:32	The gravitational polarization of the quantum vacuum as a possible solution to the dark energy problem, Dragan Hajdukovic
18:32 - 18:35	Primordial perturbations in a bouncing Universe with quintessence, Anna Paula Bacalhau
18:35 - 18:38	Refinements of Jungle Universes, Alicia Simon-Petit

Session 6 | Early universe | Room 16, level -1

14:00 - 14:21	Exotic Rotational Correlations in Emergent Quantum Geometry, Craig Hogan
14:21 - 14:42	Creation of Emergent Universe with Wormholes, Bikash Chandra Paul
14:42 - 15:03	A Cyclic Universe alternatively dominated by matter and antimatter, Dragan Hajdukovic
15:03 - 15:24	3D Quantum Bubble Collisions, Jonathan Braden
15:24 - 15:45	Born-Infeldizing gravity, Lavinia Heisenberg

15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	On stability of electroweak vacuum during inflation, Andrey Shkerin
16:35 - 16:55	A stiff Higgstory of the Universe, Daniel G. Figueroa
16:55 - 17:15	Parametric resonance after hilltop inflation caused by an inhomogeneous inflaton field, Francesco Cefalà
17:15 - 17:35	Preheating after hilltop inflation, Stefano Orani
17:35 - 17:55	The Cosmic Laboratory: Probing Inflation with Galaxy Clustering, Roland de Putter
17:55 - 18:15	The Effective Strength of Gravity and the scale of Inflation, Subodh Patil
18:15 - 18:35	Implications of the primordial power asymmetry for inflation, Christian Byrnes
Session 7 Large scale structures Room 17, level -1	
14:00 - 14:21	A relativistic approach to large-scale structure, David Wands
14:21 - 14:42	Relativistic effects and primordial non-Gaussianity in the matter density fluctuation, Jaiyul Yoo
14:42 - 15:03	Relativistic effects with cross-correlations, Enea Di Dio
15:03 - 15:24	Probing violations of slow-roll inflation at the largest observable scales with future galaxy surveys, Mario Ballardini
15:24 - 15:45	Tomographic lensing constraints with galaxy clustering, Francesco Montanari
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Cosmological nonlinear density and velocity power spectra, Jai-chan Hwang
16:35 - 16:55	General Relativity and Cosmic Structure Formation, Julian Adamek
16:55 - 17:15	Large Scale Structure with interacting Vacuum: the non-linear regime in the post-Friedman approximation, Marco Bruni
17:15 - 17:35	One-dimensional models of cosmological perturbations: direct integration in the Fourier space, Vitalii Slusar
17:35 - 17:55	TSPT: Time-Sliced Perturbation Theory for Large Scale Structure, Sergey Sibiryakov
17:55 - 18:15	Precision measurement of the local bias of dark matter halos, Titouan Lazeyras
18:15 - 18:18	Supercluster straightness as a cosmological test, Junsup Shim
Session 8 Cosmic microwave background Room 4, level 0	
14:00 - 14:25	The POLARBEAR experiment probing the cosmic microwave background polarization, Davide Poletti
14:25 - 14:45	The Quijote experiment: project overview and first results, Ricardo Génova Santos
14:45 - 15:05	CMB spectral distortions: energy release versus photon injection, Jens Chluba

15:05 - 15:25	Cosmology with the Planck all-sky Compton parameter map, Juan Francisco Macias-Perez
15:25 - 15:45	High-resolution SZ cartography of clusters of galaxies with NIKA at the IRAM 30-m telescope, Frédéric Mayet
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Dark matter decay and cosmic reionization, Isabel Oldengott
16:35 - 16:55	Is there evidence for anisotropy in CMB data?, Daniela Saadeh
16:55 - 17:15	Current constraints and forecasts on the tilt and running of the primordial tensor spectrum, Giovanni Cabass
17:15 - 17:35	Cosmological constraints on the neutron lifetime, Laura Salvati
17:35 - 17:55	UV sensitivity of Higgs inflation, Jacopo Fumagalli
17:55 - 17:58	Uniformity of cosmic microwave background as a non-inflationary geometrical effect, Branislav Vlahovic
Session 13 Gamma-ray bursts Room 2, level 7&8	
14:00 - 14:21	Thermal emission in GRB 101219B, Josefin Larsson
14:21 - 14:42	Fitting gamma-ray burst prompt emission spectra with a model for subphotospheric dissipation, Björn Ahlgren
14:42 - 15:03	Signs of magnetic acceleration and multi-zone emission in GRB 080825C, Elena Moretti
15:03 - 15:24	A new intrinsic intrinsic 3 parameter correlation in Gamma Ray Bursts, Maria Dainotti
15:24 - 15:45	GRB polarization with the POLAR detector., Nicolas Produit
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Using Gamma-Ray Bursts as Cosmological Probes, Rob Preece
16:35 - 16:55	Shedding light on the early Universe with THESEUS, Lorenzo Amati
16:55 - 17:15	An External Shock Origin of GRB 141028A, J. Michael Burgess
17:15 - 17:35	Signs of Blandford & Znajek mechanism in GRB afterglow lightcurves., Antonio Nathanail
17:35 - 17:55	Constraining emission mechanisms in gamma-ray bursts using spectral width, Magnus Axelsson
17:55 - 17:58	Study of GRB light curve decay indices in the afterglow phase, Roberta Del Vecchio
17:58 - 18:01	Observed properties of high redshift Gamma-Ray Bursts, Graziella Pizzichini
18:01 - 18:04	Moving observed Short GRBs both off-axis and into the local Universe, Giulia Stratta
Session 15 Binaries Room 3, Level 0	
14:00 - 14:26	Multi-wavelength variability of the gamma-ray binary LS I +61 303 along the super-orbital period, Diego Torres
14:26 - 14:52	Interacting pulsar winds in X-ray and gamma-ray binaries, Guillaume Dubus

14:52 - 15:18	The gamma-ray monitoring of newly discovered Be/BH binary system MWC 656, Pere Munar-Adrover
15:18 - 15:45	Making the Heaviest Elements in the Universe, Friedrich Thielemann
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:40	Swift and the Supergiant Fast X-ray Transient outburst factory, Patrizia Romano
16:40 - 17:05	High-mass X-ray binary systems through the eyes of INTEGRAL, Alexander Lutovinov
17:05 - 17:25	Vela X-1 and sgHMXB: hydro driven hard X-rays, Antonis Manousakis
17:25 - 17:45	Correlation study of spectral parameters of NS-HMXBs with Suzaku, Pragati Pradhan
17:45 - 18:05	Orbital resolved spectroscopy of GX 301-2 with MAXI, Nazma Islam
18:05 - 18:20	Broadband study of X-Per using Suzaku observations, Chandreyee Maitra
18:20 - 18:35	Orbital evolution and search for eccentricity and apsidal motion in the eclipsing HMXB 4U 1700-37, Nazma Islam
18:35 - 18:38	Blowing in the wind : accretion in high mass X-ray binaries, Ileyk El Mellah

Session 18 | Galactic accelerators and pulsars | Room 23, level 0

14:00 - 14:20	H.E.S.S. Observations of the Large Magellanic Cloud, Nukri Komin
14:20 - 14:45	Galactic Science with the Cherenkov Telescope Array, Thierry Stolarczyk
14:45 - 15:05	Modeling Bright Gamma-ray and Radio Emission from Fast Cloud Shocks at Middle-aged SNRs, Shiu Hang (Herman) Lee
15:05 - 15:25	Multiwavelength observations of gamma-ray loud binaries, Maria Chernyakova
15:25 - 15:45	Particle acceleration in Eta Carinae: the expected and unexpected, Matteo Balbo
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Pulsar observations with the MAGIC telescopes, Takayuki Saito
16:35 - 16:55	The intriguing double torus-jet PWN around PSR J0855-4644, Chandreyee Maitra
16:55 - 17:15	A Pulsar Wind Nebula Origin for Luminous TeV Source HESS J1640-465, Joseph D Gelfand
17:15 - 17:35	First-order Fermi acceleration at pulsar wind termination shock., Simone Giacché
17:35 - 17:55	Rapid particle acceleration at perpendicular shocks, John Kirk
17:55 - 18:15	Kinetic simulations of relativistic harmonic magnetic equilibria, Krzysztof Nalewajko
18:15 - 18:18	Multipolar electromagnetic fields around neutron stars: exact vacuum solutions and related properties., Jérôme Pétri

TUESDAY, December 15th

08:30 - 09:00 Registration

Plenary sessions | Room 2, Level 0

09:00 - 09:35 A unifying description of dark energy, **David Langlois**

09:35 - 10:10 Dark matter detection - an experimental overview, **Laura Baudis**

10:10 - 10:45 Towards fundamental physics from cosmological surveys, **Hiranya Peiris**

10:45 - 11:20 Coffee break and poster session (Level 0, Lobby)

11:20 - 11:55 The equation of state of dense matter, **Anna Watts**

11:55 - 12:30 Status of the Advanced Virgo project, **Fulvio Ricci**

12:30 - 14:00 Lunch break (Level 1, Cafeteria)

Session 4 | Dark energy | Room 14, Level 2

14:00 - 14:26 Planck 2015 results on Dark Energy and Modified Gravity, **Matteo Martinelli**

14:26 - 14:53 Tensions Between CMB and Weak Lensing Data Sets when Testing General Relativity, **Jason Dossett**

14:53 - 15:19 Constraints on induced gravity dark energy models, **Mario Ballardini**

15:19 - 15:45 Cold dark energy and cosmological parameter estimation, **Caroline Heneka**

15:45 - 16:15 Coffee break and poster session (Level 0, Lobby)

Session 3 | Modifications of gravity | Room 14, Level 2

16:15 - 16:35 The radial velocity profile of the filament galaxies in the vicinity of the Virgo cluster as a test of gravity, **Jounghun Lee**

16:35 - 16:55 A Universal velocity dispersion profile for pressure supported systems: evidence for MONDian gravity across 12 orders of magnitude in mass, **Reginaldo Durazo**

16:55 - 17:25 Searching for new short-range forces using optically levitated microspheres, **David Moore**

17:25 - 17:45 The variation of the fine-structure constant from disformal couplings, **Jurgen Mifsud**

17:45 - 18:10 Lorentz violation in gravity, **Diego Blas Temino**

18:10 - 18:13 Is the Ni's solution of the Tolman-Oppenheimer-Volkoff problem without the maximum-mass limit applicable to the real neutron stars? A discussion, **Lubos Neulusan**

18:13 - 18:16 A relativistic metric extension of gravity based in the dynamics and lensing of individual, groups and clusters of galaxies, **Sergio Mendoza**

18:16 - 18:19 Varying constants entropic cosmology, **Hussain Gohar**

18:19 - 18:22 The Nexus Graviton, Dark Energy and Dark Matter, **Stuart Marongwe**

18:22 - 18:25 Kaluza-Klein cosmological model in $f(R, T)$ gravity with $\Lambda(T)$, **Pradyumn Kumar Sahoo**

18:25 - 18:28	A Palatini formalism for MOND in $f(\chi)$ gravity, Ernesto Barrientos Rodríguez
18:28 - 18:31	Anisotropic Spherically Symmetric Collapsing Star From Higher Order Derivative Gravity Theory, Hossein Ghaffarnejad
Session 9 Cosmic neutrinos Room 16, Level -1	
14:00 - 14:21	Joint Constraints on Neutrino Masses from Cosmology and Particle Physics, Martina Gerbino
14:21 - 14:42	Clustering, lensing, and ISW-RS from the DEMNUni neutrino simulations, Carmelita Carbone
14:42 - 15:03	Simulating the effect of massive neutrinos on large-scale structure, Simeon Bird
15:03 - 15:24	Neutrino masses and cosmology with Lyman-alpha forest power spectrum, Christophe Yèche
15:24 - 15:45	Massive neutrinos and their effect on the large scale structure of the Universe, Francisco Villaescusa-Navarro
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:37	Constraining non-standard neutrino scenarios with Planck 2015, Massimiliano Lattanzi
16:37 - 16:59	Sterile neutrinos with secret interactions, Maria Archidiacono
16:59 - 17:20	Constraining sterile neutrinos with lyman alpha forest, Antonella Garzilli
17:20 - 17:41	A loophole to the electromagnetic cascade theory : Solving the lithium problem with a sterile neutrino., Vivian Poulin
17:41 - 18:02	The effective number of neutrinos: standard and non-standard calculations, Pablo Fernández de Salas
18:02 - 18:22	Higher-order massive neutrino perturbations in large-scale structure, Florian Führer
18:22 - 18:42	Neutrinos beyond the linear regime: a new theoretical approach, Hélène Dupuy
18:42 - 18:45	Decoherence of cosmological massive neutrinos, Daniel Boriero
Session 10 Cosmic magnetic fields Room 13, Level 2	
14:00 - 14:25	Cosmic magnetic fields and ways of probing them, Philipp Kronberg
14:25 - 14:45	Galactic magnetic fields, Andrew Fletcher
14:45 - 15:05	Probing the Intergalactic Magnetic Fields by means of high-energy pair halos around extreme blazars, Paolo Da Vela
15:05 - 15:25	Lower limits on the magnetic field strength in the early universe, Reinhard Schlickeiser
15:25 - 15:45	The Plasma Physics of TeV Blazars, Philip Chang
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Constraints on Primordial Magnetic Fields from Planck 2015, Daniela Paoletti

16:35 - 16:55	Prospects of constraining primordial magnetic fields using their effects on CMB, LSS and ionization history, Kerstin Kunze
16:55 - 17:15	Primordial Magnetism in CMB, Levon Pogosian
17:15 - 17:35	Parity odd CMB power spectrum via helical magnetic field., Hector Javier Hortua
Session 13 Gamma-ray bursts Room 7&8, Level 2	
14:00 - 14:21	Short gamma-ray bursts from binary neutron star mergers: the time-reversal scenario, Riccardo Ciolfi
14:21 - 14:42	Electromagnetic emission from long-lived binary neutron star merger remnants, Daniel Siegel
14:42 - 15:03	Dynamical mass ejection from black hole–neutron star binaries, Koutarou Kyutoku
15:03 - 15:24	Fast luminous blue transients from newborn black holes, Kazumi Kashiyama
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
Session 15 Binaries Room 3, Level 0	
14:00 - 14:26	The ultraluminous pulsar, Matteo Bachetti
14:26 - 14:52	Across the Eddington boundary: examining disc spectra at high accretion rates, Andrew Sutton
14:52 - 15:18	Sub-Eddington accretion in neutron star X-ray binaries, Rudy Wijnands
15:18 - 15:45	NuSTAR and XMM-Newton Observation of SAX J1808.4-3658 during the latest outburst, Tiziana Di Salvo
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Hot Plasma Emissions in the Ultra-compact Binary Pulsar 4U 1626-67, Norbert S. Schulz
16:35 - 16:55	Luminosity dependent change of the emission diagram in the X-ray pulsar 4U 1626-67, Filippos Koliopanos
16:55 - 17:15	Presence of a third body orbiting around XB 1916-053., Rosario Iaria
17:15 - 17:35	Missing hard states and regular outbursts: the puzzling case of the BHC 4U 1630-472, Fiamma Capitanio
17:35 - 17:51	Glitches and anti-glitches in accreting pulsars: expected properties and observability, Lorenzo Ducci
17:51 - 18:08	Understanding supernova kicks and black-hole spins in Galactic X-ray binaries, Anastasios Fragkos
18:08 - 18:11	Angular momentum loss by gravitational radiation in x-ray binaries with neutron stars, Tu e İli
Session 16 Black holes Room 17, Level -1	
14:00 - 14:21	XMM-Newton's impact on Relativistic Astrophysics: Black Holes, Norbert Schartel
14:21 - 14:42	Relativistic tidal disruption events: what do we learn from their rate distribution?, Immacolata Donnarumma

14:42 - 15:02	Un-Beamed Tidal Disruption Events at Hard X-Rays, Krzysztof Hryniewicz
15:02 - 15:22	IGR J17361-4441: a possible planetary tidal disruption event in NGC 6388, Melania Del Santo
15:22 - 15:42	Relativistic line reverberation mapping in tidal disruption events, Wenfei Yu
15:42 - 15:45	Tidal disruption events induced by the Kozai-Lidov mechanism, Naoki Seto
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:40	The Athena/X-IFU X-ray view of Hot and Energetic Universe: probing the Black Hole environment, Xavier Barcons
16:40 - 17:00	How accreting black holes may shape their surroundings through AGN feedback, Wako Ishibashi
17:00 - 17:20	Direct formation of supermassive black holes; from mergers of protogalaxies to global relativistic collapse, Lucio Mayer
17:20 - 17:40	Cosmological mass transport on galactic nuclei and the formation of high redshift quasars., Andres Escala
17:40 - 18:00	Does the obscured AGN fraction really depend on luminosity?., Sergey Sazonov
18:00 - 18:20	Mildly obscured active galaxies and the diffuse X-ray background, Valentino Esposito
18:20 - 18:23	Disentangling AGN and Star Formation Contributions in the Central Parsec of NGC 4945, Ingyin Zaw
18:23 - 18:26	An eclipsing binary black hole in MRK 421, Sergio Mendoza
18:26 - 18:29	The high energy spectrum of 3C 273, Valentino Esposito
Session 18 Galactic accelerators and pulsars Room 23, Level 0	
14:00 - 14:21	Numerical Models For Superfluid Neutron Stars With Realistic Equation Of State And Application To Pulsar Glitches, Aurélien Sourie
14:21 - 14:42	Multi-scale modelling of pulsar glitches, Brynmor Haskell
14:42 - 15:02	The role of general relativity and reconnection in pulsar radiation, Benoit Cerutti
15:02 - 15:22	The shape of a pulsar radio beam: fan beams, not the nested cones., Jaroslav Dyks
15:22 - 15:42	A new view on the Lighthouse Nebula, IGR J11014-6103, Lucia Pavan
15:42 - 15:45	A model for distortions of polarisation angle in radio pulsars, Lab Saha
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Progress on the knowledge of magnetic fields in neutron stars, Norbert Schartel
16:35 - 16:55	General-relativistic pulsars magnetospheres, Jérôme Pétri
16:55 - 17:15	Relativistic pulsar winds: structure, shocks, reconnection., Maxim Lyutikov

17:15 - 17:35	PICsar: Particle in Cell Pulsar Simulations, Mikhail Belyaev
17:35 - 17:55	Effect of geodetic precession on the evolution of pulsar high-energy pulse profiles as derived with the striped-wind model., Jérôme Pétri
17:55 - 17:58	The Crab pulsar: Examining its profile and deriving high precision X-ray ephemerides, Guillaume Belanger
Session 19 Very high energy and Cosmic rays Room 4, Level 0	
14:00 - 14:21	Diffuse emissions from radio through microwaves to gamma rays, Elena Orlando
14:21 - 14:42	Probing the Extragalactic Background Light with VERITAS, Elisa Kay Pueschel
14:42 - 15:03	Broadband characterisation and physical implications from the most extreme X-ray flaring activity of the high-peaked BL Lac Mrk 501, Josefa Becerra Gonzalez
15:03 - 15:24	Very fast TeV gamma-ray variability from the non-aligned AGN IC 310: Insight into Black Hole Lightnings, Pierre Colin
15:24 - 15:45	A bright gamma-ray flare from the blazar B2 1215+30 detected by VERITAS and Fermi-LAT, Floriana Zefi
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Non-thermal particle acceleration in astrophysical shear flows., Frank Rieger
16:35 - 16:55	FACT: Monitoring TeV Blazars with Silicon Photomultipliers, Gareth Hughes
16:55 - 17:15	MWL characterization of the blazar S5 0716+714 by MAGIC during its brightest outburst, Marina Manganaro
17:15 - 17:35	The first detection of the blazar S4 0954+65 at very-high energies with the MAGIC Telescopes during an exceptionally high optical state, Giovanna Pedalletti
17:35 - 17:55	Flat spectrum radio quasars at very high energies: the new detection of PKS 1441+25, Josefa Becerra Gonzalez
17:55 - 18:15	Evidence for quasi-periodic modulation in the gamma-ray blazar PG 1553+113, Antonio Stamerra
18:15 - 18:35	Multi-wavelength observations on the gamma-ray periodic blazar PG1553+113, Gareth Hughes
18:35 - 18:38	The long-term optical study of VHE blazars, Omar Kurtanidze

Public Talk

University of Geneva, Rue du Général-Dufour 24, Geneva
Auditoire Piaget (U600)

19:30 - 21:00 Einstein's legacy: 100 years of general relativity, **Michael KRAMER**

WEDNESDAY, December 16th

08:30 - 09:00 Registration

Plenary sessions | Room 2, Level 0

09:00 - 09:35 Making waves: modeling gravitational waves from coalescing binary systems, **Alessandra Buonanno**

09:35 - 10:10 Rattle and shine by compact binaries mergers, **Luis Lehner**

10:10 - 10:45 Experimental tests of general relativity in binary systems, **Michael Kramer**

10:45 - 11:20 Coffee break and poster session (Level 0, Lobby)

11:20 - 11:55 Quantum effects on black holes: evaporation, tunnelling, information leak. Anything observable?, **Carlo Rovelli**

11:55 - 12:30 The LHC and the Universe, **Gian Giudice**

12:30 - 14:00 Lunch break (Level 1, Cafeteria)

Session 3 | Modifications of gravity | Room 14, Level 2

14:00 - 14:21 Aspects of infrared non-local modifications of General Relativity, **Giulia Cusin**

14:21 - 14:42 Non-locality in General Relativity and Quantum Field Theory, **Xavier Calmet**

14:42 - 15:03 Beyond General Relativity: The Geometric Deformation and New Black Hole Solutions, **Jorge Ovalle**

15:03 - 15:24 Linearly shielded modifications of gravity, **Lucas Lombriser**

15:24 - 15:45 Initial conditions for simulations of arbitrary modified gravity, beyond quasi-static approximations, **Wessel Valkenburg**

15:45 - 16:15 Coffee break and poster session (Level 0, Lobby)

16:15 - 16:35 Consistent massive graviton on an arbitrary background, **Laura Bernard**

16:35 - 16:55 Linear perturbations in massive bigravity: formalism and cosmology, **Mariele Motta**

16:55 - 17:15 Gravitational waves in a bigravity model: from inflation to present, **Pietro Guarato**

17:15 - 17:35 Dualities and Symmetries of Galileons, **Johannes Noller**

17:35 - 17:55 Quasi-scale invariant inflationary attractors, **Massimiliano Rinaldi**

17:55 - 18:15 Quasi-Static Solutions for Compact Objects in Chameleon Models, **Ilia Musco**

Session 5 | Dark matter | Room 7&8, Level 2

14:00 - 14:25 Analysis update to the 2013 data from the Large Underground Xenon project, **Wing To**

14:25 - 14:45 Results on light dark matter particles with a low threshold CRESST-II detector, **Achim Gütlein**

14:45 - 15:05 Update on Dark Matter constraints from CMB anisotropies, **Vivian Poulin**

15:05 - 15:25 The formation of primordial black hole dark matter, **Sam Young**

15:25 - 15:45	Simulations of ultralight axion dark matter halos, Jens Niemeyer
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:40	Indirect searches for dark matter in the gamma-ray sky with the Fermi LAT status and prospects, Johann Cohen-Tanugi
16:40 - 17:05	Dark matter and fundamental physics with the Cherenkov Telescope Array, Emmanuel Moulin
17:05 - 17:30	Dark matter ultracompact minihalos and the small-scale early Universe, Hamish Clark
17:30 - 17:50	Astrophysical backgrounds in antiproton searches for dark matter, Michael Kachelriess
17:50 - 18:10	Cosmic ray positrons and antiprotons: implications for Dark Matter, Mathieu Boudaud
18:10 - 18:30	Dark matter searches with antideuterons, Andrea Vittino
18:30 - 18:33	The LZ Dark Matter detector, Bhawna Gomber
18:33 - 18:36	Axion as a cold dark matter candidate, Hyerim Noh
18:36 - 18:39	Indirect Dark Matter searches with the ASTRI mini-array in the framework of the Cherenkov Telescope Array, Saverio Lombardi
18:39 - 18:42	Quantum vacuum as the cause of the phenomena usually attributed to dark matter, Dragan Hajdukovic
18:42 - 18:45	Warm dark matter cosmological structures - from collapse to caustics and cores, Sinziana Paduroiu
Session 10 Cosmic magnetic fields Room 16, Level -1	
14:00 - 14:21	Relaxing the limits on inflationary magnetogenesis, Christos Tsagas
14:21 - 14:42	Relativistic chiral magnetohydrodynamics and evolution of cosmological magnetic fields, Oleg Ruchayskiy
14:42 - 15:03	First numerical simulations of the chiral MHD dynamo effect, Jennifer Schober
15:03 - 15:24	Evolution of primordial magnetic fields, Axel Brandenburg
15:24 - 15:45	MHD Turbulence and Particles, Andrey Beresnyak
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Novel Approaches for the Analysis of Extragalactic Magnetic Fields, Andrey Saveliev
16:35 - 16:55	Self-similar magnetic, turbulent and thermal energy evolution in massive galaxy clusters, Francesco Miniati
16:55 - 17:15	The Chiral Magnetic Effect and its Role in Astrophysics and Cosmology, Gunter Sigi
17:15 - 17:35	Galactic magnetic field and uncon-ventional cosmic ray propagation, Dario Grasso
17:35 - 17:55	Observing primordial helical magnetic fields?, Michael Kachelriess

Session 11 Gravitational waves Room 13, Level 2	
14:00 - 14:21	The quest for a stochastic background with LIGO/Virgo GW detectors, Tania Regimbau
14:21 - 14:42	Cosmic variance in the nanohertz gravitational wave background, Elinore Roebber
14:42 - 15:03	Gravitational Waves from a Dark Sector, Pedro Klaus Schwaller
15:03 - 15:24	Acoustically generated gravitational waves from thermal first order phase transitions, Mark Hindmarsh
15:24 - 15:45	Gravitational waves from a thermal first order phase transition: numerical simulations, David Weir
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Late-time cosmology with eLISA, Nicola Tamanini
16:35 - 16:55	Electromagnetic Emission from Compact Supermassive Black Hole Binaries, Zoltan Haiman
16:55 - 17:15	The fate of Super Massive Black Holes in galaxy mergers, Andres Escala
17:15 - 17:35	The underlying simplicity of precessing black-hole binaries, Mark Hannam
17:35 - 17:55	Accurate Phenomenological Waveform Models for Black Hole Coalescence in the Frequency Domain, Sascha Husa
17:55 - 18:15	Gravitational waveform from binary neutron star mergers: Numerical relativity and Effective-one body, Kenta Hotokezaka
18:15 - 18:35	Gravitational Wave Signals from 3D Neutrino Simulations of Core-Collapse Supernovae Hydrodynamics, Haakon Andresen
Session 14 Disks & jets Room 23, Level 0	
14:00 - 14:22	Highlights on massive winds from AGN, Massimo Cappi
14:22 - 14:42	High Energy flares of FSRQs, Luigi Pacciani
14:42 - 15:02	Relativistic Speeds and Transverse Velocity Structure on 50 kpc Scales in NGC6251, Robert Laing
15:02 - 15:22	The accretion-ejection connection in the Galactic black hole candidate X-ray binary MAXI J1836-194, Thomas Russell
15:22 - 15:42	GRS 1915+105 and its spectral variability from the keV to the MeV band, Marek Nikolajuk
15:42 - 15:45	Coeval observations of a complete sample of flat-spectrum blazars with Effelsberg, IRAM 30m, and Planck, Jörg Paul Rachen
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:36	New connection between plasma conditions near black hole event horizons and outflow properties, Karri Koljonen
16:36 - 16:57	Jets and winds from super-critical accreting black holes, Roberto Soria
16:57 - 17:18	Real-Time Evolution Of Relativistic Jets In Microquasars, Pedro Luis Luque-Escamilla

17:18 - 17:39	Black Hole Jets from MRI-Generated Magnetic Fields, Kyle Parfrey
17:39 - 17:59	Stability of relativistic two-component jets, Dimitrios Millas
17:59 - 18:19	Rapid variations of polarisation in X-ray binaries, Dave Russell
18:19 - 18:22	The Blandford-Znajek theory revisited, Luigi Foschini
18:22 - 18:25	Evolution of luminosity-linearsize relation for sources with steep radio spectrum, Alla Miroshnichenko
Session 15 Binaries Room 3, Level 0	
14:00 - 14:30	Millisecond pulsars: on their own, with a friend, or even two, Jason Hessels
14:30 - 14:55	THE YOUNG, RELATIVISTIC BINARY PULSAR J1906+0746, Joeri van Leeuwen
14:55 - 15:15	Two new relativistic MSPs from the HTRU-North, Marina Berezina
15:15 - 15:45	Simultaneous X-ray and Radio observations of mode-switching radio pulsars PSR B0943+10 and PSR B1822-09, Wim Hermsen
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:45	Formation of millisecond pulsars and double neutron stars, Thomas Tauris
16:45 - 17:10	Accretion and rotation power in ms pulsars, Alessandro Papitto
17:10 - 17:30	The peculiar X-ray variability of the transitional pulsar IGR J18245-2452, Carlo Ferrigno
17:30 - 17:50	Simulations of the Magnetospheres of Accreting Millisecond Pulsars: Torque Enhancement, Spin Equilibrium, and Jet Power, Kyle Parfrey
17:50 - 18:05	3FGL J1544.6-1125: radio imaging analysis of newest transitional millisecond pulsar, Amruta Jaodand
18:05 - 18:20	Orbitally Modulated High-Energy Emission from Black Widows and Redbacks, Zorawar Wadiasingh
18:20 - 18:35	On the low magnetic fields of millisecond pulsars, Marilyn Cruces
18:35 - 18:38	A Frequencies Shift in Relativistic Binary System (Theoretical Study), Abd El Fady Morcos
18:38 - 18:41	Using millisecond pulsars to calibrate XMM/Newton onboard clock, Marilyn Cruces
18:41 - 18:45	Clues to the evolution of helium WD-WD binaries from the Palomar Transient Factory, John Cannizzo

Session 16 Black holes Room 17, Level -1	
14:00 - 14:25	General relativistic precession of orbits around the stellar-mass black hole in H 1743-322, Adam Ingram
14:25 - 14:47	On the Detection of an Extreme Gravitationally Redshifted Fe-line constraining the Rotation of the Super-Massive Black Hole in Mrk 876, Eugenio Bottacini
14:47 - 15:12	The high energy variability of V404 Cygni during the June 2015 outburst, Lorenzo Natalucci
15:12 - 15:33	Measuring the Innermost Stable Circular Orbits of Supermassive Black Holes, George Chartas
15:33 - 15:36	MHD Shocks in Accretion onto a Rotating Black Hole, Masaaki Takahashi
15:36 - 15:39	Accretion of a relativistic kinetic gas into a black hole, Paola Rioseco
15:39 - 15:42	Angular momentum loss by gravitational radiation in binaries with black hole, Dolunay Kocak
15:42 - 15:45	Quasi-periodic oscillations of perturbed tori, Varadarajan Parthasarathy
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Rapid variability as a probe of warped space-time around accreting black holes, Magnus Axelsson
16:35 - 16:55	Approximation of relevant elliptical equations in the Schwarzschild metric and some astrophysical applications, Vittorio De Falco
16:55 - 17:15	Relativistic Bondi-Hoyle Accretion onto a Rotating Black-Hole: Density Gradients, Fabio Lora
17:15 - 17:35	Frame dragging, unipolar induction and Kerr black hole magnetospheres, Isao Okamoto
17:35 - 17:38	Gaps in black holes magnetospheres, Ksenia Ptitsyna
17:38 - 17:41	Can Black Holes Be Accelerators of Spinning Massive Particles?, Benjamin Koch
17:41 - 17:44	Comments on the Effect of Frame Dragging, Ismail Özbakir
17:44 - 17:47	Hawking radiation cannot exist if quantum vacuum fluctuations are gravitational dipoles, Dragan Hajdukovic
Session 19 Very high energy and Cosmic rays Room 4, Level 0	
14:00 - 14:25	The H.E.S.S. Extragalactic Sky, Jill Chevalier
14:25 - 14:50	MAGIC latest results, Oscar Blanch
14:50 - 15:15	Recent Science Highlights from VERITAS, John Quinn
15:15 - 15:45	Exploring the TeV Universe with HAWC, Robert Lauer
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)

16:15 - 16:40	Extragalactic science with the Cherenkov Telescope Array, Lucie Gerard
16:40 - 17:00	The SST-1M Project of the Cherenkov Telescope Array: Status and Physics Perspectives, Matthieu Heller
17:00 - 17:20	ASTRI SST-2M prototype and ASTRI mini-array data analysis and scientific prospects in the framework of the Cherenkov Telescope Array, Saverio Lombardi
17:20 - 17:45	Multiwavelength Spectral and Polarization Signatures of Shocks in Relativistic Jets, Markus Boettcher
17:45 - 18:10	Time-dependent Pair Halo Emission from Very-High-Energy Gamma-Ray Sources, Foteini Oikonomou

20:30 - 00:00

Symposium dinner

THURSDAY, December 17th

08:30 - 09:00 Registration

Plenary sessions | Room 2, Level 0

09:00 - 09:35 IceCube and the discovery of high-energy cosmic neutrinos, **Francis Halzen**

09:35 - 10:10 The gamma-ray Universe, **Jim Hinton**

10:10 - 10:45 Cosmic ray acceleration and transport, **Pasquale Blasi**

10:45 - 11:20 Coffee break and poster session (Level 0, Lobby)

Plenary sessions | International Union of Pure and Applied Physics Room 2, Level 0

11:20 - 11:40 Lest we forget, **Virginia Trimble**

11:40 - 11:50 Award ceremony, **Virginia Trimble**

11:50 - 12:10 Magnetars: the Universe's strongest magnets, **Nanda Rea**

12:10 - 12:30 Towards a unified model for the gamma-ray burst prompt emission & a new luminosity-hardness relation for cosmology, **Sylvain Guiriec**

12:30 - 14:00 Lunch break (Level 1, Cafeteria)

Session 1 | Numerical relativity | Room 14, Level 2

14:00 - 14:21 Merger of binary neutron stars: Gravitational waves and mass ejection, **Masaru Shibata**

14:21 - 14:42 Magnetar formation from the merger of binary neutron stars, **Bruno Giacomazzo**

14:42 - 15:03 Effect of Equation of State on Magnetized Binary Neutron Star Mergers, **Takumu Kawamura**

15:03 - 15:24 Rotation profile of neutron star merger remnants, **Wolfgang Kastaun**

15:24 - 15:45 A Hamiltonian approach to relativistic fluid dynamics and binary inspiral, **Charalampos Markakis**

15:45 - 16:15 Coffee break and poster session (Level 0, Lobby)

16:15 - 16:35 CAFE: A relativistic Magnetohydrodynamics code, **Alejandro Cruz Osorio**

16:35 - 16:55 Simulating the start of inflation from inhomogeneous initial conditions, **William East**

16:55 - 17:15 Critical Collapse of Radiation Fluids: Deviations from Spherical Symmetry, **Thomas Baumgarte**

17:15 - 17:35 Evolution of a self-gravitating spherical massless scalar field on compactified constant mean curvature hypersurfaces, **Manuel David Morales**

17:35 - 17:55 Black hole mimickers, **Daniela Perez**

17:55 - 18:15 The nature of trapping horizons in collapses forming black holes, **Ilija Musco**

18:15 - 18:18 Asymptotic evolution of Robinson-Trautman spacetimes, **Alberto Saa**

Session 5 Dark matter Room 7&8, Level 2	
14:00 - 14:21	Recent Developments on X-ray Signals from Dark Matter Decay in Galaxies and Galaxy Clusters, Jeroen Franse
14:21 - 14:42	Unveiling the self-coupling of dark matter with galaxy clusters, David Richard Harvey
14:42 - 15:03	Multimessenger searches for WIMPs with suppressed interactions, Thomas David Jacques
15:03 - 15:24	Non linear evolution of BAO and IR - resummation, Mikhail Ivanov
15:24 - 15:45	Cosmology with the Dark Energy Survey, Adam Amara
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
Session 11 Gravitational waves Room 13, Level 2	
14:00 - 14:20	Dynamics of compact binaries at the fourth post-Newtonian approximation, Laura Bernard
14:20 - 14:40	A new instability to black-hole spin precession, Davide Gerosa
14:40 - 15:00	Saturation of the f-mode instability in neutron stars, Pantelis Pnigouras
15:00 - 15:03	Gravitational wave attenuation through interactions with charged particles, Joseph Avenoso
15:03 - 15:06	Search of the primordial gravitational waves with Very Long Baseline Interferometry, Oleg Titov
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:36	Gravitational waves from binary supermassive black holes missing in pulsar observations, Stefan Osłowski
16:36 - 16:57	Status of the European Pulsar Timing Array, Gregory Desvignes
16:57 - 17:19	Search for continuous gravitational wave in EPTA dataset, Antoine Llassus
17:19 - 17:41	Limits on the amplitude of the nanohertz gravitational wave Universe from the European Pulsar Timing Array, Lindley Lentati
17:41 - 18:03	Lessons on massive black hole binaries from pulsar timing arrays, Alberto Sesana
18:03 - 18:25	Constraining the energy scale of cosmic strings with PTAs, Sotiris Sanidas
18:25 - 18:45	Pulsar timing detection of gravitational waves from supermassive black hole binaries in stellar environment, Alexander Raskazov
Session 12 Gravitational lensing Room 16, Level -1	
14:00 - 14:21	How the observational quantities of strong gravitational lens effect depend on BH's mass and spin, Hiroimi Saida
14:21 - 14:42	The future for strong gravitational lensing, R. Benton Metcalf
14:42 - 15:03	Search for lensed QSOs in the OGLE survey, Zuzanna Kostrzewa-Rutkowska

15:03 - 15:24	Weak lensing mass map in DECaLS DR1 survey, Huanyuan Shan
15:24 - 15:45	CMB lensing - galaxy cross-correlations, Yuuki Omori
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Where are the baryons?, Dominique Eckert
16:35 - 16:55	A direct measurement of tomographic lensing power spectra from CFHTLenS, Fabian Köhlinger
16:55 - 17:15	Gravitational microlensing as a probe for dark matter, Vitalii Sliusar
17:15 - 17:35	Test of relativistic gravity using the microlensing of broad iron line in quasars, Ievgen Vovk
17:35 - 17:55	CMB lensing and deflection angles in high precision cosmology, Fanizza Giuseppe
17:55 - 17:58	Gravitational lensing flexion measurements in the Hubble Frontier Fields, Markus Rexroth
17:58 - 18:01	Effects of the second-order vector mode on weak lensing signals, Shohei Saga
18:01 - 18:04	Black Holes, Neutron Stars and White Dwarf Candidates from Microlensing with OGLE-III, Zuzanna Kostrzewa-Rutkowska
18:04 - 18:07	How to use geodetic VLBI to measure relativistic light deflection from extragalactic objects, Oleg Titov
Session 14 Disks & jets Room 23, Level 0	
14:00 - 14:20	Narrow-line Seyfert 1 galaxies - rebels of the AGN family, Emilia Järvelä
14:20 - 14:40	Unveiling the parent population of beamed narrow-line Seyfert 1s, Marco Berton
14:40 - 15:00	Broad-band properties of flat-spectrum radio-loud narrow-line Seyfert 1 galaxies, Luigi Foschini
15:00 - 15:20	The radio look of hard X-ray AGN, Francesca Panessa
15:20 - 15:23	Quasi-periodic oscillations from relativistic hydrodynamical slender tori, Bhupendra Mishra
15:23 - 15:26	Quasi-Periodic Oscillations are more than just frequencies, Frederic Vincent
15:26 - 15:29	QPOs and Lense-Thirring precession, Rebecca Nealon
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:36	Resistive GRMHD simulations of accretion disks around Kerr black holes: connecting large and small scales, Matteo Bugli
16:36 - 16:57	Three dimensional global General Relativistic Radiative Magnetohydrodynamical simulations to test stability of thin disk around black hole, Bhupendra Mishra
16:57 - 17:18	Accretion disk around a super-Eddington accreting neutron star, Anna Chashkina
17:18 - 17:38	Structure of magnetized transonic accretion disks, Pavel Abolmasov

17:38 - 17:59	Thick tori and flows around rotating boson stars, Zakaria Meliani
17:59 - 18:19	Transient dynamics of vortices in relativistic regions of accretion disks around black holes., Viacheslav Zhuravlev
18:19 - 18:39	Astrophysical Boundary Layers: A New Picture, Mikhail Belyaev
18:39 - 18:42	A curved jet model for the synchrotron emission of the BL Lac object PG 1553+113., Antonio Stamerra
18:42 - 18:45	Spectral Analysis of ULXs in Pairs of Interacting Galaxies M51 and NGC 4485/90 Using Swift-XRT, Lis Sulistiyowati
Session 17 Activity at the galactic center Room 17, Level -1	
14:00 - 14:21	Reconstruction of the past history of the center of our Galaxy through X-Ray reflection spectra simulations, Michael Walls
14:21 - 14:42	Examining Accretion Disk Properties of Sgr A* Via Stellar Wind Interactions, Ian Christie
14:42 - 15:03	Imaging a boson star at Sgr A*, Frederic Vincent
15:03 - 15:24	NuSTAR Discovery of Galactic Center Hard X-ray Emission, Kerstin Perez
15:24 - 15:45	Origin of the gamma-ray emission from the Galactic Centre, Denys Malyshev
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Fermi Bubbles as a probes of Galactic halo environment, Dmitriy Chernyshov
16:35 - 16:55	Disrupted globular clusters explain gamma ray excess in the Galactic center, Bence Kocsis
16:55 - 17:15	The Radio Evolution of the Galactic Center Magnetar, Joseph D Gelfand
17:15 - 17:35	Proposed Laboratory Simulation of Galactic Positron In-Flight Annihilation in Atomic Hydrogen, Benjamin Brown
Session 19 Very high energy and Cosmic rays Room 4, Level 0	
14:00 - 14:25	Correlated neutrino and photon emission during γ -ray flares from the blazar Mrk 421, Maria Petropoulou
14:25 - 14:45	Diagnose the Sources of IceCube Neutrinos with Fermi Observation, Zhuo Li
14:45 - 15:05	Searches for ultra-high energy neutrinos and photons with the Pierre Auger Observatory, Foteini Oikonomou
15:05 - 15:25	Recent results from the ANTARES deep-sea neutrino telescope, Daniele Vivolo
15:25 - 15:45	Exploring the Ultra High Energy Cosmic Rays with the Pierre Auger Observatory, Sergio Petrea
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	Study of the galactic cosmic ray energy spectrum with the ARGO-YBJ experiment, Antonio Surdo
16:35 - 16:55	The universal model of cosmic ray production, Jörg Paul Rachen

16:55 - 17:15	Theoretical uncertainties in extracting cosmic ray diffusion parameters: the boron to carbon ratio, Yoann Genolini
17:15 - 17:35	Escape model: CR composition and diffuse gamma-ray and neutrino backgrounds, Michael Kachelriess
17:35 - 17:38	spectrum of primary cosmic ray electrons, Rafik Sedrati
17:38 - 17:41	A Uniformly Selected, All-Sky Optical AGN Catalog for UHECR Correlation, Ingyin Zaw
Session 20 Future challenges and experiments Room 3, Level 0	
14:00 - 14:24	The Cherenkov Telescope Array, Michael Daniel
14:24 - 14:43	The e-ASTROGAM mission, Vincent Tatischeff
14:43 - 15:06	Large Area X-ray Proportional Counter (LAXPC) instrument onboard ASTROSAT, J S Yadav
15:06 - 15:25	XIPE the X-ray Imaging Polarimetry Explorer, Paolo Soffitta
15:25 - 15:45	The X-ray Integral Field Unit for the second large class ESA mission Athena, Jan-Willem den Herder
15:45 - 16:15	Coffee break and poster session (Level 0, Lobby)
16:15 - 16:35	The Galactic Center - a unique laboratory for relativity, Franck Gillessen
16:35 - 16:55	Space astrometry with Gaia and relativistic astrophysics, Sergei Klioner
16:55 - 17:15	Relativistic Astrophysics with ALMA, Robert Laing
17:15 - 17:35	The Square Kilometre Array Observatory: Prospects for Relativistic Astrophysics, Robert Braun
17:35 - 17:55	The Large European Array for Pulsars: a leap of the EPTA for gravitational wave detection, Kuo Liu
17:55 - 18:15	The MICROSCOPE mission ready to test the Equivalence Principle in space, Joel Bergé
18:15 - 18:25	The High Energy cosmic-Radiation Detection (HERD) Facility onboard China's Future Space Station, Ming Xu
18:25 - 18:35	Project QVADIS: Testing the existence of the gravitational anomalies by the study of trans-Neptunian binaries, Dragan Hajdukovic
18:35 - 18:45	Testing varying speed of light cosmologies in future experiments., Mariusz Dabrowski

FRIDAY, December 18th

08:30 - 09:00 Registration

Plenary sessions | Room 2, Level 0

09:00 - 09:35 ESA gravitational wave observatory, eLISA and LISA Pathfinder, **Stefano Vitale**

09:35 - 10:10 Exact solutions in astrophysics, **Mustapha Ishak**

10:10 - 10:45 Exploring gravity in the strong field regime with high throughput X-ray measurements, **Luigi Stella**

10:45 - 11:20 Coffee break and poster session (Level 0, Lobby)

11:20 - 11:55 Heading into the abyss: X-ray spectral timing of accreting black holes, **Andrew Fabian**

11:55 - 12:30 Disks and jets, **Alexander Tchekhovskoy**

12:30 - 14:00 Lunch break (Level 1, Cafeteria)

14:00 - 15:35 Cover: Highlights and conclusions

15:35 - 15:45 Texas 2017 - Cape Town, **Markus Boettcher**

15:45 - 16:30 Coffee break and farewell (Level 0, Lobby)

Poster list		
Nb	Presenter	Title
1	Bhawna Gomber	The LZ Dark Matter detector
2	Hyerim Noh	Axion as a cold dark matter candidate
3	Saverio Lombardi	Indirect Dark Matter searches with the ASTRI mini-array in the framework of the Cherenkov Telescope Array
4	Dragan Hajdukovic	Quantum vacuum as the cause of the phenomena usually attributed to dark matter
5	Sinziana Paduroiu	Warm dark matter cosmological structures - from collapse to caustics and cores
6	Jörg Paul Rachen	Coeval observations of a complete sample of flat-spectrum blazars with Effelsberg, IRAM 30m, and Planck
7	Luigi Foschini	The Blandford-Znajek theory revisited
8	Alla Miroshnichenko	Evolution of luminosity-linear-size relation for sources with steep radio spectrum
9	Bhupendra Mishra	Quasi-periodic oscillations from relativistic hydrodynamical slender tori
10	Frederic Vincent	Quasi-Periodic Oscillations are more than just frequencies
11	Rebecca Nealon	QPOs and Lense-Thirring precession
12	Antonio Stamerra	A curved jet model for the synchrotron emission of the BL Lac object PG 1553+113.
13	Lis Sulistiyowati	Spectral Analysis of ULXs in Pairs of Interacting Galaxies M51 and NGC 4485/90 Using Swift-XRT
14	Roberta Del Vecchio	Study of GRB light curve decay indices in the afterglow phase
15	Graziella Pizzichini	Observed properties of high redshift Gamma-Ray Bursts
16	Giulia Stratta	Moving observed Short GRBs both off-axis and into the local Universe
17	Achillies Strantzas	Evidence for electromagnetic black hole spin down in GRB light curves
18	Maria Charisi	Catalog of isolated emission episodes in Gamma-ray bursts from Fermi, Swift and BATSE
19	Nazma Islam	Orbital evolution and search for eccentricity and apsidal motion in the eclipsing HMXB 4U 1700-37
20	Ileyk El Mellah	Blowing in the wind : accretion in high mass X-ray binaries
21	Tugçe Içli	Angular momentum loss by gravitational radiation in x-ray binaries with neutron stars
22	Abd El Fady Morcos	A Frequencies Shift in Relativistic Binary System (Theoretical Study)

23	Marilyn Cruces	Using millisecond pulsars to calibrate XMM/Newton onboard clock
24	John Cannizzo	Clues to the evolution of helium WD-WD binaries from the Palomar Transient Factory
25	Naoki Seto	Tidal disruption events induced by the Kozai-Lidov mechanism
26	Ingyin Zaw	Disentangling AGN and Star Formation Contributions in the Central Parsec of NGC 4945
27	Sergio Mendoza	An eclipsing binary black hole in MRK 421
28	Valentino Esposito	The high energy spectrum of 3C 273
29	Masaaki Takahashi	MHD Shocks in Accretion onto a Rotating Black Hole
30	Paola Rioseco	Accretion of a relativistic kinetic gas into a black hole
31	Dolunay Kocak	Angular momentum loss by gravitational radiation in binaries with black hole
32	Varadarajan Parthasarathy	Quasi-periodic oscillations of perturbed tori
33	Ksenia Ptitsyna	Gaps in black holes magnetospheres
34	Benjamin Koch	Can Black Holes Be Accelerators of Spinning Massive Particles?
35	Ismail Özbakir	Comments on the Effect of Frame Dragging
36	Dragan Hajdukovic	Hawking radiation cannot exist if quantum vacuum fluctuations are gravitational dipoles
37	Felipe Garrido Goicovic	Formation of discs around super-massive black hole binaries from infalling clouds
38	Maria Charisi	Supermassive black hole binary candidates - Quasars with optical periodicity in the Palomar Transient Factory
39	Branislav Vlahovic	Uniformity of the Cosmic Microwave Background as a non-inflationary geometrical effect
40	Shouhong Wang	Law of Gravity, Structure and Geometry of Black Holes and the Universe
41	Ming Xu	The High Energy cosmic-Radiation Detection (HERD) Facility onboard China's Future Space Station
42	Dragan Hajdukovic	Project QVADIS: Testing the existence of the gravitational anomalies by the study of trans-Neptunian binaries
43	Mariusz Dabrowski	Testing varying speed of light cosmologies in future experiments.
44	Jérôme Pétri	Multipolar electromagnetic fields around neutron stars: exact vacuum solutions and related properties.
45	Lab Saha	A model for distortions of polarisation angle in radio pulsars

46	Guillaume Belanger	The Crab pulsar: Examining its profile and deriving high precision X-ray ephemerides
47	Joseph Avenoso	Gravitational wave attenuation through interactions with charged particles
48	Oleg Titov	Search of the primordial gravitational waves with Very Long Baseline Interferometry
49	Junsup Shim	Supercluster straightness as a cosmological test
50	Fanizza Giuseppe	CMB lensing and deflection angles in high precision cosmology
51	Markus Rexroth	Gravitational lensing flexion measurements in the Hubble Frontier Fields
52	Shohei Saga	Effects of the second-order vector mode on weak lensing signals
53	Zuzanna Kostrzewa-Rutkowska	Black Holes, Neutron Stars and White Dwarf Candidates from Microlensing with OGLE-III
54	Oleg Titov	How to use geodetic VLBI to measure relativistic light deflection from extragalactic objects
55	Hector Javier Hortua	Parity odd CMB power spectrum via helical magnetic field.
56	Daniel Boriero	Decoherence of cosmological massive neutrinos
57	Alberto Saa	Asymptotic evolution of Robinson-Trautman spacetimes
58	Omar Kurtanidze	The long-term optical study of VHE blazars
59	Rafik Sedrati	spectrum of primary cosmic ray electrons
60	Ingyin Zaw	A Uniformly Selected, All-Sky Optical AGN Catalog for UHECR Correlation
61	Erick Jonathan Almaraz Aviña	Viability of a quintessence model with inverse power law potential as a dark energy candidate
62	Mariana Jaber	Constraints on a DE parametrization using BAO and Forecasting for future surveys
63	Attaallah Almasi	Force sensor for chameleon a candidate for dark energy
64	Jacob Moldenhauer	Exploring the consequences of parameter values in cosmological models with CosmoEJS, an interactive package of cosmology Java simulations
65	Hanwool Koo	Testing the dark sector interaction by using the isolated galaxy pairs from SDSS DR10
66	Leonid Marochnik	Graviton dominated eras of Universe evolution
67	Dragan Hajdukovic	The gravitational polarization of the quantum vacuum as a possible solution to the dark energy problem
68	Anna Paula Bacalhau	Primordial perturbations in a bouncing Universe with quintessence
69	Alicia Simon-Petit	Refinements of Jungle Universes

70	Surajit Chattopadhyay	Consequences of extended holographic Ricci dark energy in chameleon Brans-Dicke cosmology
71	Lubos Neslusan	Is the Ni's solution of the Tolman-Oppenheimer-Volkoff problem without the maximum-mass limit applicable to the real neutron stars? A discussion
72	Sergio Mendoza	A relativistic metric extension of gravity based in the dynamics and lensing of individual, groups and clusters of galaxies
73	Hussain Gohar	Varying constants entropic cosmology
74	Stuart Marongwe	The Nexus Graviton, Dark Energy and Dark Matter
75	Pradyumn Kumar Sahoo	Kaluza-Klein cosmological model in R,T gravity with $\Lambda(T)$
76	Ernesto Barrientos Rodriguez	A Palatini formalism for MOND in chi gravity
77	Hossein Ghaffarnejad	Anisotropic Spherically Symmetric Collapsing Star From Higher Order Derivative Gravity Theory
78	Dnyaneshwar Pawar	Marder's Two-Fluid Dark Energy Cosmological Models In Saez-Ballester Theory of Gravitation

PRACTICAL INFORMATION

CERTIFICATE OF ATTENDANCE

A certificate of attendance will be sent to all registered participants per e-mail after the Symposium.

INVOICES

Invoices are delivered at the registration desk and after the Symposium upon request only (texas2015@ch.kuoni.com) at no charge.

REGISTRATION & ACCOMMODATION DESK

The registration and accommodation desk is open during the following hours:

Sunday 13th 16:00-18:30 at the museum of Natural Sciences

Monday 14th 8:30-18:00

Tuesday 15th 8:30-18:00

Wednesday 16th 8:30-18:00

Thursday 17th 8:30-18:00

Friday 18th 8:30-16:00

Registration fee for Participants includes: Admission to the scientific sessions, Symposium documents including: badge, final programme, coffee breaks, welcome drink, access to the exhibitions and poster area.

Registration fee for Participants does not include: Accommodation, lunches, Conference Dinner (reservation required), participation at excursions, travel expenses, personal insurance.

NAME BADGE

Symposium badges must be worn at all times during Symposium activities. The badge is required for admission to sessions and social activities that are included in the registration.

LUNCH

Lunches are not included in the registration fee. The CIGG restaurant (located on the 1st floor) will offer several menu options (the cost for a lunch (starter, main dish and desert) is around CHF 20). Sandwiches will also be available. A special Christmas buffet will be available on Friday 18th for CHF 30.

WIFI

Wireless internet will be available in the Symposium centre.
Username: Texas – Password: 2015

CONTACT

SYMPOSIUM SECRETARIAT

Kuoni Global Travel Services AG
Geneva Business Center

Avenue des Morgines 12
CH-1213 Petit-Lancy
Switzerland

Phone: +41 (0)58 702 62 97
E-mail: texas2015@ch.kuoni.com

SOCIAL PROGRAMME

WELCOME COCKTAIL

Sunday, December 13th, 16:00

The Welcome Cocktail will be served in parallel to the participant's registration in the entry hall of the Museum of Natural Sciences. The event is free of charge for the Symposium participants.

Museum of Natural Sciences is located:
Route de Malagnou 1, 1208 Geneva

How to reach the Museum:

Bus n°1, 5, 8, 25: stop "Museum" / Tram n°12: stop "Villereuse"

SYMPOSIUM DINNER

Wednesday, December 16th, 20:30

The Symposium dinner is held at the Edelweiss Restaurant, with a typical Swiss meal appropriate for the winter nights



Ticket: 65 CHF for registered participants – Booking in advance is required

Place: The Edelweiss Restaurant – Place de la Navigation 2, 1201 Genève

Direction from CIGG:

Tram 15 (*Palettes*):
from stop "Nations"
to stop "Môle"

Walking distance
from "Môle" to the
Edelweiss Restaurant:
5 to 10 min



EXCURSIONS

VISIT TO CERN

Visits of CERN are organised:

Monday 14th 13:30-17:30

Tuesday 15th 13:30-17:30

Wednesday 16th 13:30-17:30

Thursday 17th 13:30-17:30

Ticket: 10 CHF for registered participants – Booking in advance is required

Transfer by bus directly from and back to the CIGG conference venue.

Important Notice: Valid identity card / passport will be required.

GENEVA GUIDED TOUR “RIVE DROITE”

Saturday 19th December 09:00-13:00 (4 hours)

Start this tour with an introduction of the United Nations square. Then enjoy a guided visit the Museum of History of Science and finish the tour in the city centre to discover the Old Town.

Meeting Point: CIGG at 9 am

Ticket: 30 CHF for registered participants – Booking in advance is required

EINSTEIN IN BERN EXCURSION

Saturday 19th December – All day (9:00 to approximately 17:00)

Transfer to Bern by coach, you will then enjoy a guided tour of the Einstein Museum. After a lunch break you will visit the Einstein Haus. Then return to Geneva.

Meeting point for departure: CIGG at 9 am

Ticket: 120 CHF for registered participants – Booking in advance is required

GENERAL INFORMATION ABOUT GENEVA

ALTITUDE: 374m (1,227ft) above sea level

CLIMATE: Average temperatures:
winter 10°C (50°F), summer 25°C (73°F)

CURRENCY: Swiss Franc (CHF or SFr)

Average rate: 1 Euro = CHF 1.08. The exchange rate for the Euro and the Swiss Franc is subject to daily market fluctuations. Conversion rates are available at foreign exchange offices, banks and in newspapers.

DRIVING

In town speed is limited to 50 km/h or 30 km/h in some areas, on national roads beyond city limits 80 km/h, and on motorways 120 km/h. A motorway sticker, "vignette", is compulsory on highways and semi-highways. It is valid for 1 year and available at the price of CHF 40. – at post offices, garages, customs offices and touring club offices (TCS). Wearing seat belts, both in the front and in the back of a vehicle is compulsory.

ELECTRICITY

Voltage 220 Volts – socket converters are available in local shops.

FREE GENEVA TRANSPORT CARD

All visitors staying at a hotel in Geneva can benefit from this personal and non-transferable pass with free of charge.

It is established upon the visitor's check-in, enabling its holder to use the entire public transportation network of Geneva without restriction (bus, train and boat), valid for the entire duration of the stay including the departure day. However the pass is limited to the area of Geneva and is not valid for trips around Switzerland.

GENEVA PASS

This pass allows its holder to make use of the great diversity of the Geneva touristic offers enjoying preferential fares, free entries and gifts. Valid for 24, 48 or 72 hours it is your "open Sesame" to museums, cruises, visits, tours and many other surprises.

LANGUAGES

There are three official languages in Switzerland: French, German, Italian. The official language in the western part of Switzerland and therefore also in Geneva is French. Due to its international character English and also German are often spoken in Geneva.

TIPPING

Prices in hotels, restaurants, taxi fares etc. include taxes and service. A tip is therefore not required, but justified for good service.





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