

Monday morning, July 2nd
Sapienza University, Rome - Aula Magna

09:00 - 09:35

Inaugural Session and delivery of Marcel Grossmann Award

Chairperson: Ruffini Remo

Plenary Session: Mathematics and General Relativity

Chairperson: Ruffini Remo

09:35 - 10:10 Lectio Magistralis	Shing-Tung Yau (Harvard University) Quasi-local mass at null infinity
10:10 - 10:45	Rashid Sunyaev (Max Planck Institute for Astrophysics)
10:45 - 11:15	Coffee Break
11:15 - 11:50	Malcolm J. Perry (University of Cambridge) Black Hole Entropy and Soft Hair
11:50 - 12:25	Thomas Hertog (KU Leuven) A smooth exit from eternal inflation
12:25 - 13:00	Jean-Luc Lehnert (Max Planck Institute for Gravitational Physics) No smooth beginning for spacetime
13:00 - 13:35	Ivan Agullo (Louisiana State University) Loop Quantum Cosmology and the Cosmic Microwave Background
13:35	Group Picture
15:15 - 19:15	Parallel Sessions
19:30 - 20:00 Public Lecture	Jeremiah Ostriker (Columbia University) Ultra-light scalars as cosmological dark matter
20:00 - 20:30 Public Lecture	Malcolm Longair (University of Cambridge) Ryle and Hewish: 50 and 100 Year Anniversaries [Radio Astrophysics and the Rise of High Energy Astrophysics]

Monday afternoon, July 2nd

Code	Classroom	Title	Chairperson
Aula Magna - Discussions on plenary presentations			
AC1 A	GEO11	Spectral and Temporal properties of Black Holes and neutron stars and the theoretical models	Sandip Chakrabarti
BH2 A	FF4	Theoretical and observational studies of astrophysical black holes	Alexander Zakharov
BH5 A	GEO8	Black hole thermodynamics	Hernando Quevedo
AT1 A	CNR/Marc	Extended Theories of Gravity and Quantum Cosmology	Salvatore Capozziello, Mariafelicia De Laurenti
AT1 E	CNR/Pol	Extended Theories of Gravity and Quantum Cosmology	Salvatore Capozziello, Mariafelicia De Laurenti
AT3 A	GEO1	Wormholes, Energy Conditions and Time Machines	Francisco Lobo, Diego Rubiera-Garcia
AT7 A	ChA	Theories of gravity: alternatives to the cosmological and particle standard models	Stefano Bellucci, Valerio Faraoni and Orlando Luongo
DM1 A	ChC	Interacting Dark matter	Nikolaos Mavromatos
DE1 A	FF6	Dark Energy and the accelerating universe	Alexei Starobinsky, David Polarski
CM5 A	Amaldi	Present and future of CMB observations	Marco Bersanelli and Aniello Mennella
GW1 A	FF3	Sources of Gravitational Waves	Andrew Melatos
GW7	Cabibbo	Ground-based detectors: from second to third generation	Giovanni Losurdo
GB4	FF2	Photospheric emission in GRBs	Gregory Vereshchagin, Damien Begue
CM2	Careri	Cosmic Backgrounds from radio to far-IR	Carlo Burigana
GB8	Conversi	GRB 130427A, 160509A, 160625B, The Polar View of BdHNe Morphology	Binbin Zhang, Yu Wang
EU2 A	MATHPic	Quantum Fields	Vladimir Belinski
ES3	MATH4	Exact Solutions (including higher dimensions)	Susan Scott
QG2 A	ChIV	Quantum Gravity Phenomenology	Giovanni Amelino-Camelia
PT2 A	FF5	Gravitational lensing and shadows	Perlick Volker, Oleg Tsupko
PT3 A	FF7	Experimental Gravitation	Angela di Virgilio, Claus Laemmerzahl
HE7	CNR/Conv	Future missions for high-energy astrophysics	Lorenzo Amati, Enrico Bozzo
HR2	MATH5	Angelo Secchi and Astrophysics	Paolo De Bernardis, Gabriele Gionti, Costantino Sigismondi

Tuesday morning July 3rd
Sapienza University, Rome - Aula Magna

Plenary Session: Kilonovae and Gravitational Waves

Chairperson: Enrico Costa

09:00 - 09:35	Elena Pian (IASF Bologna) Kilonovae: the cosmic foundries of heavy elements
09:35 - 10:10	Nial Tanvir (University of Leicester) A new era of gravitational-wave/electromagnetic multi-messenger astronomy
10:10 - 10:45	Tsvi Piran (Hebrew University of Jerusalem) Mergers and GRBs: past present and future
10:45 - 11:15	Coffee Break
11:15 - 11:50	Stephan Rosswog (Stockholm University) Neutron star mergers as heavy element production site
11:50 - 12:25	David Shoemaker (MIT LIGO Laboratory) LIGO's past and future observations of Black Hole and Neutron Star Binaries
12:25 - 13:00	Wang Yu (ICRANet) On the role of binary systems in GW170817/GRB170817A/AT2017gfo
13:00 - 13:35	Hao Liu (University of Copenhagen) An independent investigation of gravitational wave data
15:15 - 19:15	Parallel Sessions
19:30 - 20:00 Public Lecture	Marc Henneaux (Université Libre de Bruxelles) The cosmological singularity
20:00	SYSU Connection Reception sponsored by the Sun Yat-Sen University - China

Tuesday afternoon, July 3rd

Code	Classroom	Title	Chairperson
Aula Magna - Discussions on plenary presentations			
AC1 B	GEO11	Spectral and Temporal properties of Black Holes and neutron stars and the theoretical models	Sandip Chakrabarti
BH2 B	FF4	Theoretical and observational studies of astrophysical black holes	Alexander Zakharov
BH5 B	GEO8	Black hole thermodynamics	Hernando Quevedo
AT1 B	CNR/Marc	Extended Theories of Gravity and Quantum Cosmology	Salvatore Capozziello, Mariafelicia De Laurentis
AT2	MATH4	The Einstein-Infeld-Hoffmann Legacy in Mathematical Relativity	Shadi Tahvildar-Zadeh, Michael Kiessling
AT3 B	GEO1	Wormholes, Energy Conditions and Time Machines	Francisco Lobo, Diego Rubiera-Garcia
AT7 B	ChA	Theories of gravity: alternatives to the cosmological and particle standard models	Stefano Bellucci, Valerio Faraoni and Orlando Luongo
DM1 B	ChC	Interacting Dark matter	Carlos Argüelles
DE1 B	FF6	Dark Energy and the accelerating universe	Alexei Starobinsky, David Polarski
CM4 A	FF5	Tensions on Λ CDM cosmological model and model-independent constraints	Joan Solà Peracaula, Luca Amendola
CM5 B	Careri	Present and future of CMB observations	Marco Bersanelli, Aniello Mennella
CM3	Amaldi	Future Steps in Cosmology with CMB Spectral Distortions	Jens Chluba
GW1 B	FF3	Sources of Gravitational Waves	Andrew Melatos
GW4	Cabibbo	Middle-Frequency (0.1 Hz to 10 Hz) Gravitational Wave (GW) Detection and its Sources	Wei-Tou Ni
GB3	CNR/Conv	Cosmology and multi-messenger astrophysics with Gamma-Ray Bursts	Lorenzo Amati, Massimo Della Valle, Paul O'Brien
GB1	CNR/Poli	Fast radio bursts: observations ideas and prospects	Bing Zhang, Duncan Lorimer
GB9	Conversi	GRB 151027A and GRB 090618, the equatorial view of BdHNe	Grant Mathews
EU2 B	MATH1	Quantum Fields	Alexander Kamenshchik
QG2 B	ChIV	Quantum Gravity Phenomenology	Giovanni Amelino-Camelia
NS1-2	FF2	Observational Constraints on the Micro and Macroscopic Properties of Compact Stars	Jorge Rueda, Rodrigo Negreiros
		New States of Matter in the Universe - From quarks to the Cosmos	Aurora Perez Martínez, Cesar Augusto Vasconcello
PT4 A	Rasetti	Variation of the fundamental constants violation of the fundamental symmetries and dark matter	Victor Flambaum, Yevgeny Stadnik
PT3 B	FF7	Experimental Gravitation	Angela di Virgilio, Claus Laemmerzahl
PT5	CNR/Giac	Testing gravitation theories in space	Roberto Peron, Francesco Vespe
GW8	ChVIII	Dense stellar environments as sites of gravitational wave emission	Roberto Capuzzodolcetta, Manuel Arca Sedda
HE3	Lauree	The first Chinese X-ray astronomy mission Insight-HXMT at MGXV	Filippo Frontera, Shu Zhang
HE8	MATH5	Astronomical Data in the Multi-messenger era	Ulisses Barres de Almeida, Andy Pollock
HR1	FF8	History of Relativity and Cosmology	Christian Bracco, Tilman Sauer
SF1	ChD	Strong (EM) Fields Physics and Laboratory Astrophysics	Sang Pyo Kim, She-Sheng Xue

Wednesday morning, July 4th
Sapienza University, Rome - Aula Magna

Plenary Session: Future Precision Tests of GR

Chairperson: Laemmerzhall Claus

09:00 - 09:35	Stefano Vitale (University of Trento) Gravitation Wave Astronomy in ESA science programme
09:35 - 10:10	Takaaki Kajita (University of Tokyo) Status of KAGRA and its scientific goals
10:10 - 10:45	Masaki Ando (University of Tokyo) DECIGO: Gravitational-Wave Observation from Space
10:45 - 11:15	Coffee Break
11:15 - 11:50	Jun Luo (Sun Yat-Sen University) TianQin: a space-borne gravitational wave detector
11:50 - 12:25	Jo Van Den Brand (Dutch National Institute for Subatomic Physics Nikhef, and VU University Amsterdam) Gravitational wave science and Virgo
12:25 - 13:00	Ernst Maria Rasel (Leibniz Universität Hannover)
13:00 - 13:35	Manuel Rodrigues The first results of the MICROSCOPE test of the equivalence principle in space
15:15 - 19:15	Free afternoon
19:30	Official Banquet Palazzo Colonna

Thursday morning, July 5th
Sapienza University, Rome - Aula Magna

Plenary Session: GRBs and CMB

Chairperson: Tavani Marco

09:00 - 09:35	Victoria Kaspi (McGill University) Fast Radio Bursts
09:35 - 10:10	Bing Zhang (University of Nevada) From gamma-ray bursts to fast radio bursts: unveiling the mystery of cosmic bursting sources
10:10 - 10:45	Jean-Loup Puget The Planck mission
10:45 - 11:15	Coffee Break
11:15 - 11:50	Jorge Armando Rueda Hernandez (ICRANet) Binary-driven hypernovae and the understanding of gamma-ray bursts
11:50 - 12:25	Remo Ruffini (ICRANet) TBD
12:25 - 13:00	Heino Falcke (Radboud University Nijmegen) Imaging Black Holes now and in the future
13:00 - 13:35	Luc Blanchet (Institut d'Astrophysique de Paris) Post-Newtonian Theory and Gravitational Waves
15:15 - 19:15	Parallel Sessions
19:30 - 20:00 Public Lecture	Jean-Loup Puget The Planck mission
20:00 - 20:30 Public Lecture	Lyman Page (Princeton University) Measuring the Cosmic Microwave Background

Thursday afternoon, July 5th

Code	Classroom	Title	Chairperson
Aula Magna - Discussions on plenary presentations			
AC3 A	GEO11	Accretion discs and jets	Eva Hackmann and Audrey Trova
BH2 C	FF4	Theoretical and observational studies of astrophysical black holes	Alexander Zakharov
BH7 A	GEO8	Black Holes in Higher Dimensions (Black Rings and Black Strings)	Jutta Kunz
AT1 C	CNR/Marc	Extended Theories of Gravity and Quantum Cosmology	Salvatore Capozziello, Mariafelicia De Laurentis
AT1 E	CNR/Polì	Extended Theories of Gravity and Quantum Cosmology	Salvatore Capozziello, Mariafelicia De Laurentis
AC2	ChD	MHD processes near compact objects	Sergey Moiseenko
AT4 A	GEO1	Massive gravity and related modifications of General Relativity	Michael Volkov
DM4	FF6	Self Gravitating Systems and Dark Matter	Marco Merafina
CM4 B	FF5	Tensions on LCDM cosmological model and model-independent constraints	Joan Solà Peracaula and Luca Amendola
GW5-6	FF3	DECIGO The Role of Numerical Relativity in Gravitational Wave Observations	Masaki Ando, Niegel Bishop
GW9	Cabibbo	Advanced Data-Analysis Techniques for Gravitational-Wave Detection	Sergio Frasca, Paola Leaci
GB7	MATH4	Lessons from GW170817 / GRB170817A	Jonathan Granot
BN8	FF7	Relativistic Binary Stars Merging: Population Synthesis &/or Multimessenger Observations	Vladimir Lipunov
BN3	Conversi	NS-NS and NS-WD mergers and kilonovae	Jorge Rueda, Chris Belczynski
EU2 C	MATHPic	Quantum Fields	Andrei Lebed
QG3	ChA	Loop quantum gravity: cosmology and black holes	Parampreet Singh, Jorge Pullin
NS3	FF2	Different aspects of the QCD phase diagram investigated with hadronic models	Debora Peres Menezes, Constança Providência
PT4 B	Rasetti	Variation of the fundamental constants, violation of the fundamental symmetries and dark matter	Victor Flambaum, Yevgeny Stadnik
BN6	CNR/IAC	Post-Newtonian expansion and analytic approximations	Luc Blanchet
CS1	ChIV	Cosmic Strings	Reinoud Jan Slagter
HE1	Amaldi	Very High Energy Gamma Rays	Razmik Mirzoyan, Alessandro De Angelis
HE2	Careri	High Energy Astrophysical Neutrino detection	Antonio Capone
ED1	MATH5	Teaching Einsteinian Physics to School Students	David Blair, Matteo Ruggiero
BS2 A	CNR/Conv	Scalar fields in cosmology	Alfredo Macias, Darío Núñez

Friday morning, July 6th
Sapienza University, Rome - Aula Magna

Plenary Session: Multimessenger Astrophysics

Chairman: Giommi Paolo

09:00 - 09:35	Razmik Mirzoyan (Max Planck Institute for Physics) Gamma-Ray and Multi-Messenger Highlights with MAGIC
09:35 - 10:10	Elisa Resconi (Technical University Munich) Neutrino Astronomy in the Multi-messenger Era
10:10 - 10:45	Francis Halzen (University of Wisconsin-Madison) IceCube: Opening a New Window on the Universe from the South Pole
10:45 - 11:15	Coffee Break
11:15 - 11:50	Jin Chang (Chinese Academy of Sciences) DAMPE and its latest results
11:50 - 12:25	Ralph Engel (Karlsruhe Institute of Technology) What have we learned about ultra-high-energy cosmic rays from the Pierre Auger Observatory?
12:25 - 13:00	Paolo De Bernardis (Sapienza - University of Rome)
13:00 - 13:35	Fabio Gargano <i>DAMPE</i> and its latest results
15:15 - 19:15	Parallel Sessions
19:30 - 20:00	Anne Archibald ¹
Public Lecture	Does extreme gravity affect how objects fall?

20:00 - 20:30

James Lattimer (Stony Brook University)
The history of r -process

Friday afternoon, July 6th

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Aula Magna - Discussions on plenary presentations			
AC3 B	GEO11	Accretion discs and jets	Eva Hackmann, Audrey Trova
BH2 D	FF4	Theoretical and observational studies of astrophysical black holes	Alexander Zakharov
BH7		Black Holes in Higher Dimensions (Black Rings and Black Strings)	Jutta Kunz,
B-BH8	GEO8	Hawking radiation in analogue black-holes	Jeff Steinhauer
AT1 D	CNR/Marc	Extended Theories of Gravity and Quantum Cosmology	Salvatore Capozziello, Mariafelicia De Laurentis
AT1 F	CNR/Giac	Extended Theories of Gravity and Quantum Cosmology	Salvatore Capozziello, Mariafelicia De Laurentis
AT5	CNR/Poli	Constructive gravity	Marcus Werner
AT4 B	GEO1	Massive gravity and related modifications of General Relativity	Michael Volkov
AT6	ChA	Applied Newton-Cartan Geometry	Eric Bergshoeff
DE2	ChIV	Dark Energy and Large Scale structure	Radouane Gannouji, Clement Stahl
PT6	FF3	Fundamental physics in Space	Meike List
DE1 C	FF6	Dark Energy and the accelerating universe	Alexei Starobinsky, David Polarski
PT4 C	Rasetti	Variation of the fundamental constants, violation of the fundamental symmetries and dark matter	Victor Flambaum, Yevgeny Stadnik
GB6	Careri	GeV emission from Gamma Ray Bursts	Francesco Longo
GB11	Conversi	Plasma acceleration and transparency in GRBs	She-Sheng Xue and Carlo Luciano Bianco
ES1	ChD	Exact Solutions in Four and Higher Dimensions: Mathematical Aspects	George Alekseev, Fabio Briscese
QG1	FF7	Loop Quantum Gravity	Jerzy Lewandowski, Marcin Kisielowski
NS4	Cabibbo	Pulsars' methodology for fundamental physics	Andrea Possenti
PT2 B	FF5	Gravitational lensing and shadows	Perlick Volker, Oleg Tsupko
WD2	ChC	Origin and physics of Soft Gamma-ray Repeaters and Anomalous X-ray Pulsars	Manuel Malheiro
HE6	MATHPic	cosmic ray acceleration and radiative dissipation in relativistic jets and IceCube	Federico Fraschetti, Matthew G. Baring
HE5	Amaldi	Neutrino Astronomy	Paolo Padovani, Paolo Giommi
BN9	CNR/IAC	Gravitational interaction of n-pole point particles and higher-spin fields	Donato Bini, Jan Steinhoff
DM2	MATH5	Dark Matter and rare processes	Rita Bernabei and Zurab Berezhiani
BN4	FF8	End of white dwarfs and type Ia supernova	Yukikatsu Terada, Keiichi Maeda

Saturday morning, July 7th
Sapienza University, Rome - Aula Magna

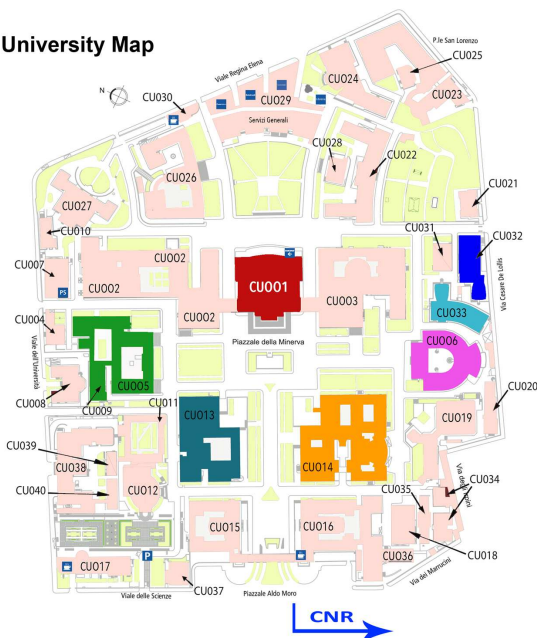
Plenari Session: The frontiers

Chair: Fulvio Ricci

09:00 - 09:35	Markus Arndt (University of Vienna) Experiments to Probe Quantum Linearity at the Interface to Gravity & Complexity
09:35 - 10:10	Tobias Westphal (University of Vienna) Micro-mechanical measurements of weak gravitational forces
10:10 - 10:45	Shu Zhang (Institute of High Energy Physics) Introduction to Insight-HXMT: China's first X-ray Astronomy Satellite
10:45 - 11:15	Coffee break
11:15 - 11:50	Lorenzo Amati (INAF - OAS Bologna) Cosmology and multi-messenger astrophysics with Gamma-Ray Bursts
11:50 – 12.25	Elisabetta Cavazuti (ASI – Roma) Gev LAT observations from GRBs and active galactic nuclei
12:25 – 13:00	Remo Ruffini (ICRANet) Concluding Remarks
	Roy Kerr Towards MG16

World Scientific Open Access Proceedings information is available at the meeting website "[Proceedings](#)" link on the right side navigation panel.

University Map



CU001 AULA MAGNA

CU033 PHYSICS (Fermi)
Aula Cabibbo/FF Cabibbo
Aula 2/FF2
Aula 3/FF3
Aula 4/FF4
Aula 5/FF5
Aula 6/FF6
Aula 7/FF7
Aula 8/FF8

CU013 PHYSICS (Marconi)
Aula Amaldi/FMAmaldi
Aula Rasetti/FMRasetti
Aula Careri/FMCareri
Aula Conversi/FMConversi
Sala Lauree

CU014 CHEMISTRY (Cannizzaro)
Aula A/ChA
Aula C/ChC
Aula D/ChD

CU032 CHEMISTRY (Caglioti)
Aula IV/ChIV
Aula VIII/ChVIII

CU006 MATHEMATICS (Castelnuovo)
Aula Picone/MATPicone
Aula I/MATI
Aula IV/MATIV
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CU005 EARTH SCIENCES - GEOLOGY
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Aula 11/GEO11