

FEBRUARY
Lectures at Nice « Observatoire de la Côte d'Azur »

			Chairman: Rosquist Kjell Stockolm University
1	Monday	9-9:10	Opening remarks Coullet Pierre and Ruffini Remo
		9:10-10	Einasto Jaan Tartu Observatory and ICRANet <i>Large Scale Structure of the Universe</i>
		10-11	Chakrabarti Sandip S.N. Bose National Centre for Basic Sciences and ICRANet <i>Black holes accretion</i>
		11-12	Vereshchagin Gregory ICRANet <i>Relativistic kinetic theory</i>
		14-15	Vereshchagin Gregory ICRANet <i>Relativistic kinetic theory</i>
		15-16	Morbidelli Alessandro Cote D'Azur Observatory <i>Planetary systems</i>
2	Tuesday	9-10	Manchester Richard CSIRO <i>Pulsars and Gravitational Wave Detection</i>
		10-11	Einasto Jaan Tartu Observatory and ICRANet <i>Large Scale Structure of the Universe</i>
		11-12	Chakrabarti Sandip S.N. Bose National Centre for Basic Sciences and ICRANet <i>Black holes accretion</i>
		14-15	Morbidelli Alessandro Cote D'Azur Observatory <i>Planetary systems</i>
		15-16	Melchiorri Alessandro University of Rome <i>New Results on Cosmic Microwave Anisotropies</i>
		16-17	Regimbau Tania Cote D'Azur Observatory <i>The astrophysical SB: source and detection</i>
3	Wednesday	9-10	Einasto Jaan Tartu Observatory and ICRANet <i>Large Scale Structure of the Universe</i>

		10-11	Chakrabarti Sandip S.N. Bose National Centre for Basic Sciences and ICRANet <i>Black holes accretion</i>
		11-12	Vereshchagin Gregory ICRANet <i>Relativistic kinetic theory</i>
		14-15	Boer Michael Haute Provence Observatory <i>Observations of GRBs</i>
		15-16	Boer Michael Haute Provence Observatory <i>Observations of GRBs</i>
		16-16.20	Pandolfi Stefania University of Rome <i>Inflationary Constraints and reionization</i>
		16:20-16:40	Menegoni Eloisa University of Rome <i>Cosmological constraints on variations of fundamental constants</i>
4	Thursday	9-10	Vereshchagin Gregory ICRANet <i>Relativistic kinetic theory</i>
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		11-12	Chakrabarti Sandip S.N. Bose National Centre for Basic Sciences and ICRANet <i>Black holes accretion</i>
		14-15	Chakrabarti Sandip S.N. Bose National Centre for Basic Sciences and ICRANet <i>Black holes accretion</i>
		15-16	Rabbia Yves Cote d’Azur Observatory <i>Stellar interferometry</i>
		16-17	Rabbia Yves Cote d’Azur Observatory <i>Stellar interferometry</i>
5	Friday	9-10	Einasto Jaan Tartu Observatory and ICRANet <i>Large Scale Structure of the Universe</i>
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6	Saturday		
7	Sunday		
			Chairman: Kleinert Hagen Free University of Berlin
8	Monday	9-10	Mignard Francois Cote d'Azur Observatory <i>GAIA mission</i>
		10-11	Mignard Francois Cote d'Azur Observatory <i>GAIA mission</i>
		11-12	Rabbia Yves Cote d'Azur Observatory <i>Stellar interferometry</i>
		14-15	Guillot Tristan Cote d'Azur Observatory <i>Exoplanets</i>
		15-16	Guillot Tristan Cote d'Azur Observatory <i>Exoplanets</i>
9	Tuesday	9-10	Damour Thibault IHES and ICRANet <i>Two-body problem in General Relativity</i>
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		11-12	Damour Thibault IHES and ICRANet <i>Two-body problem in General Relativity</i>
		14-15	Vinet Jean-Yves Cote d'Azur Observatory <i>GR ground based and space missions</i>
		15-16	Vinet Jean-Yves Cote d'Azur Observatory <i>GR ground based and space missions</i>
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		15-16	Vinet Jean-Yves Cote d'Azur Observatory <i>GR ground based and space missions</i>
12	Friday	9-10	Chaibi Oualid Cote d'Azur Observatory <i>The Art of GW Detection: Instrumentation & Practice</i>
		10-11	Chaibi Oualid Cote d'Azur Observatory <i>The Art of GW Detection: Instrumentation & Practice</i>
		11-12	Benoît Cristophe Cote d'Azur Observatory <i>Dark energy and Cosmology</i>
		14-15	Benoît Cristophe Cote d'Azur Observatory <i>Dark energy and Cosmology</i>
		15-16	Benoît Cristophe Cote d'Azur Observatory <i>Dark energy and Cosmology</i>
13	Saturday		
14	Sunday		

			Chairman: Frontera Filippo University of Ferrara
15	Monday	9-10	Della Valle Massimo INAF and ICRANet <i>Supernovae: Historical background</i>
		10-11	Della Valle Massimo INAF and ICRANet <i>Observational properties</i>
		11-12	Rosati Piero ESO and ICRANet <i>Baryonic and Dark matter in clusters of galaxies</i>
		14-15	Minazzoli Olivier Cote d'Azur Observatory <i>Laser ranging and time transfer experiments in the solar system</i>
		15-16	Ferrari Chiara Cote d'Azur Observatory <i>Non-thermal component of galaxy clusters</i>
		16-17	Ferrari Chiara Cote d'Azur Observatory <i>Non-thermal component of galaxy clusters</i>
16	Tuesday	9-10	Della Valle Massimo INAF and ICRANet <i>Supernovae: SN rates</i>
		10-11	Della Valle Massimo INAF and ICRANet <i>SN types and Environments</i>
		11-12	Rosati Piero ESO and ICRANet <i>Baryonic and Dark matter in clusters of galaxies</i>
		14-15	Vinet Jean-Yves Cote d'Azur Observatory <i>GR ground based and space missions</i>
		15-16	Vinet Jean-Yves Cote d'Azur Observatory <i>GR ground based and space missions</i>
		16-17	Patricelli Barbara University of Rome "La Sapienza"
17	Wednesday	9-10	Della Valle Massimo INAF and ICRANet <i>SNe e GRBs</i>
		10-11	Della Valle Massimo INAF and ICRANet <i>Cosmology with type Ia SNe</i> <i>Supernovae with ELTs</i>

		11-12	Frontera Filippo University of Ferrara <i>GRBs observations</i>
		14-15	Caito Letizia University of Rome "La Sapienza"
		15-16	Izzo Luca University of Rome "La Sapienza"
		16.30-17	Concluding remarks Chardonnet Pascal, Ruffini Remo, Vakili Farrokh
18	Thursday		Grasse-Calern
19	Friday		LSBB

6 graduate students for all 3 weeks

Additional 3 graduate students for the second and third weeks

Additional 4 graduate students for the third week

The logistics will be addressed to Pina while transportation and travel to ICRANet.

IRAPP School in Ferrara 2010 – March 22-26
Almost final program

Goal: X-/gamma-ray observational astrophysics and prospects

Monday 22

9.00-11.00 Coded mask image deconvolution techniques 1 (J. Stephen, INAF, Bologna)
11.00-11.30 Coffee break
11.30-13.30 Temporal analysis techniques 1 (M. Orlandini, INAF, Bologna)
13.30-15.00 Lunch
15.00-16.30 Current X-/gamma-ray telescopes and prospects 1 (F. Frontera, University Ferrara)
16.30-17.00 Coffee break
17.00-18.30 Spectral analysis techniques 1 (L. Amati, INAF, Bologna)

Tuesday 23

9.00-11.00 Coded mask image deconvolution techniques 2 (J. Stephen, INAF, Bologna)
11.00-11.30 Coffee break
11.30-13.30 Temporal analysis techniques 2 (M. Orlandini, INAF, Bologna)
13.30-15.00 Lunch
15.00-16.30 Current X-/gamma-ray telescopes and prospects 2 (F. Frontera, University Ferrara)
16.30-17.00 Tea break
17.00-18.30 Spectral analysis techniques 2 (L. Amati, INAF, Bologna)

Wednesday 24

9.00-11.00 Coded mask image deconvolution techniques 3 (J. Stephen, INAF, Bologna)
11.00-11.30 Coffee break
11.30-13.30 Temporal analysis techniques 3 (M. Orlandini, INAF, Bologna)
13.30-15.00 Lunch
15.00-16.30 Current X-/gamma-ray telescopes and prospects 3 (F. Frontera, University of Ferrara)
16.30-17.00 Tea break
17.00-18.30 Spectral analysis techniques 3 (L. Amati, INAF, Bologna)

Thursday 25

9.00-11.00 Millisecond pulsars and r-modes: theory vs. observations (A. Drago, University of Ferrara)
11.00-11.30 Coffee break
11.30-13.30 Black holes in binary systems: theory versus observations 1 (L. Titarchuk, University of Ferrara)
13.30-15.00 Lunch
15.00-16.30 Spectrum-energy correlations in gamma ray bursts 1 (L. Amati, INAF, Bologna)
16.30-17.00 Coffee break

17.00-18.30 GRB prompt emission properties in the optical/IR band 1 (C. Guidorzi, University of Ferrara)

Friday 26 March

9.00-10.00 X-ray spectral and temporal properties of black holes in binary systems
(E. Montanari, Istituto CALVI and UNIFE)

10.00-11.00 X-ray spectral formation in compact objects: the transition layer paradigm (R. Farinelli, UNIFE)

11.00-11.30 Coffee break

11.30-13.30 Black holes in binary systems: theory versus observations 2 (L. Titarchuk, University of Ferrara)

13.30-15.00 Lunch

15.00-16.30 Spectrum-energy correlations in gamma ray bursts 2 (L. Amati, INAF, Bologna)

16.30-17.00 Coffee break

17.00-18.30 GRB prompt emission properties in the optical/IR band 2 (C. Guidorzi, University of Ferrara)

The Second GALILEO-XU GUANGQI Meeting

第二届伽利略 - 徐光启会议

INTERNATIONAL ORGANIZING COMMITTEE

ARMENIA Haik Harutyunian • R. Martirosyan
AUSTRALIA Blair, David
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ESTONIA Einasto, Jaan
FRANCE Boer, Michel • Couillet, Pierre • Damour, Thibault • Mignard, Francois • Vakili, Farrokh
GERMANY Aharonian Felix • Kleinert, Hagen • Nicolai Hermann
INDIA Chakrabarti, Sandip K.
ISRAEL Piran, Tsvi
ITALY Amati, Lorenzo • Belinski, Vladimir • Bianco, Carlo Luciano • Chincarini Guido • De Bernardis, Paolo • Della Valle, Massimo • Falciano, Speranza • Filippi, Simonetta • Frontera, Filippo • Giannone, Pietro • Pucacco, Giuseppe • Quevedo, Fernando • Renieri, Alberto • Ruffini, Remo (**co-chairman**) • Ruocco, Giancarlo • Vereshchagin, Gregory • Vissani, Francesco • Xue, Shesheng
JAPAN Misao, Sasaki
KOREA (Seoul) Bum, Hoon Lee • Changrim, Ahn • Doo, Jong Song • Hyun, Kyu Lee • Hyung, Won Lee • Lee, Chul Hoon • Sang, Pyo Kim • Sung-Won, Kim
KOREA (Pyongyang) Kim Jik Su • Ri Chang Hyok
NEW ZEALAND Kerr, Roy • Wiltshire, David
RUSSIA Arkhangelskaya, Irene • Aksenov, Alexey
SWEDEN Rosquist, Kjell
SWITZERLAND Christodoulou, Demetrios
UNITED KINGDOM Kramer, Michael • Willingale, Richard
USA Arnett, David • Everitt, Francis • Fang, Li-Zhi (**co-chairman**) • Jantzen, Robert • Mester, John • Misner, Charles • Shuxian, Li • Titarchuk, Lev • Whitcomb, Stan
VATICAN STATE Funes, Jose Gabriel

LOCAL ORGANIZING COMMITTEE

Adamo, Cristina • Barbaro, Pina • Beaumont, Jean Luc • Chardonnet, Pascal (**Chairman**) • Del Beato, Annapia • Di Berardino, Federica • Latorre, Silvia • Regi, Massimo



July 12-17, 2010 – Nice, France



PROGRAM

2nd Galileo-XuGuangqi Meeting

11-16 July 2010



Villa Hanbury
Ventimiglia (Italy)



Villa Ratti
Nice (France)



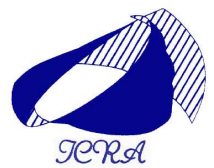
CRANet



Ministero degli Affari Esteri



Embassy of
Italy in Seoul -
Office of S&T



ICRA



Observatoire
de la CÔTE d'AZUR



Institute for
the Early
Universe



KASI 한국천문연구원
Korea Astronomy & Space Science Institute



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Legend

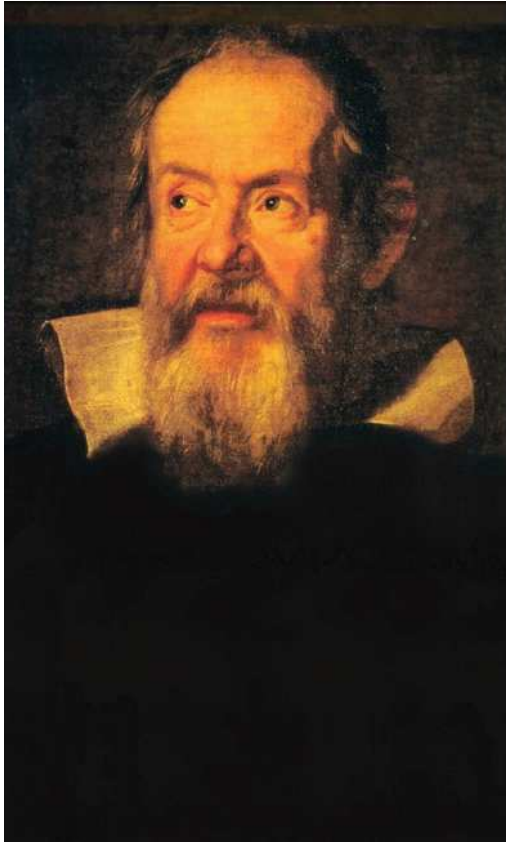
- o ICRANet Representatives in the Steering and Scientific Committee
- Faculty
- * Secretariat and Administration

* * *

2nd Galileo-XuGuangqi Meeting

con il contributo del Ministero degli Affari Esteri,
Direzione Generale per la Promozione e la Cooperazione Culturale

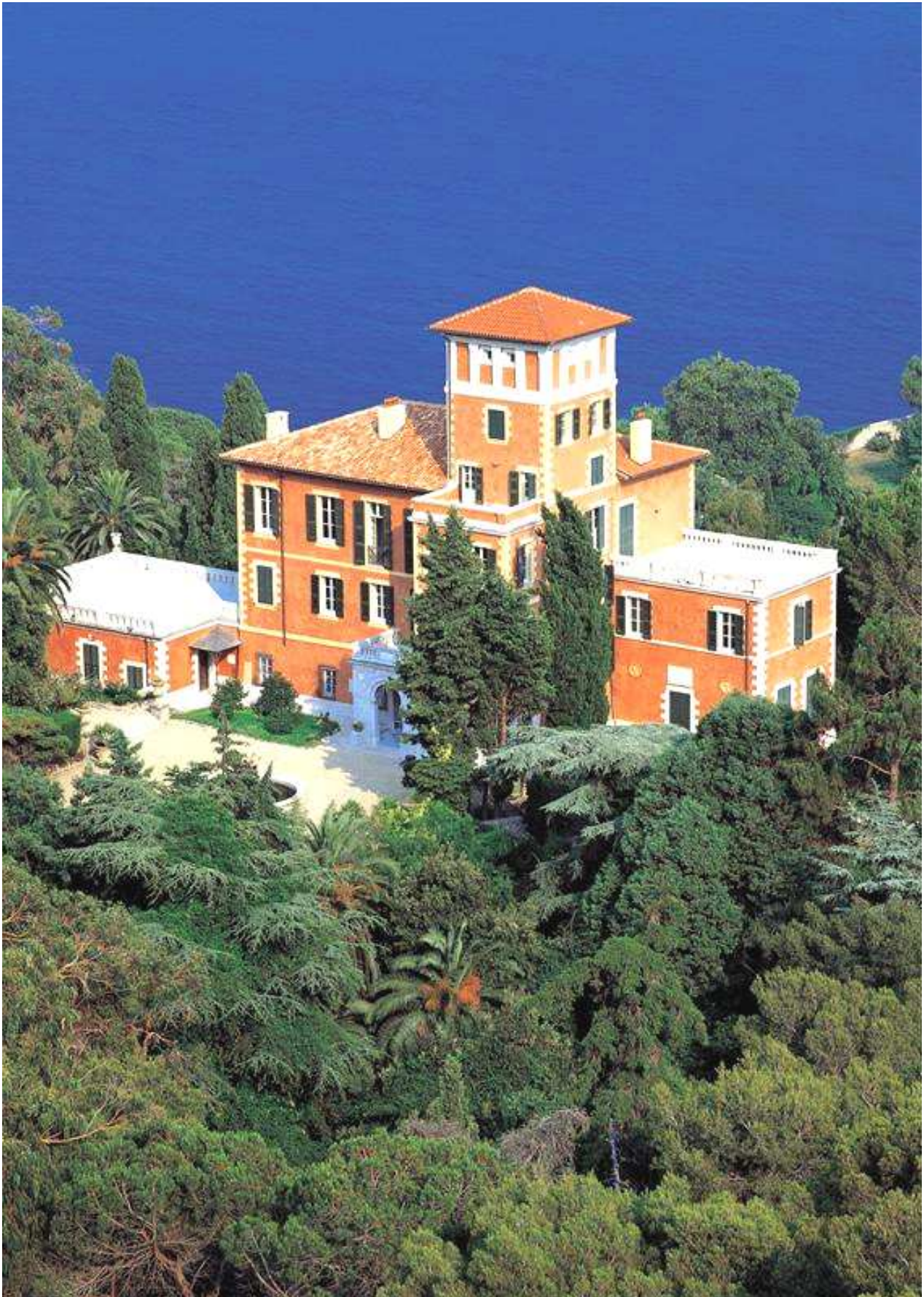
Sunday July 11, 2010
Hanbury Botanic Gardens (Ventimiglia)
16:00 – 19:00 Registration



The “Galileo – Xu Guangqi meetings” have been initiated in 2009 to celebrate the 400th anniversary of the use by Galileo Galilei of the telescope in order to study the structure of our Universe. The meetings dedicated to recall the European roots of the modern scientific research in China and in the Orient and communicate the recent progress in one of the most advanced fields of scientific research: the one of relativistic astrophysics. These results are achieved on the ground of the theories of Albert Einstein and thanks to unprecedented numbers of observational techniques: in X-ray, Gamma-ray, optical wave-lengths from space based observatories, in radio telescopes wavelengths from telescopes on the ground as well as in particle physics from underground observatories. The name of Xu Guangqi, the most eminent collaborator of Matteo Ricci (Ri Ma Dou), celebrates his activities in bringing to China the works of Euclid and Galileo and his fostering the modernization and scientific development of China. The “Galileo – Xu Guangqi Meetings” are called every year, alternatively in the East and in the West, to promote the scientific cooperation of Eastern Countries, including China and Korea with the international scientists in the field of Relativistic Astrophysics.

Monday Morning - July 12
Black Holes, Neutron Stars and Dark Matter
Chairperson: Shuang-Nan Zhang

- 8:30 Welcoming Address:
University of Genova
University of Nice – Sophia Antipolis
ICRANet (International Center for Relativistic Astrophysics)
Free University of Berlin
ICTP (International Center for Theoretical Physics)
INFN (National Institute of Nuclear Physics)
Italian Foreign Ministry
KASI (Korea Astronomy and Space Science Institute)
LeCosPa (Leung Center for Cosmology and Particle Astrophysics)
NAOC (National Astronomical Observatories, Chinese Academy of Sciences)
- 9:00 Roy Kerr (*30 minutes*)
Stationary axisymmetric metrics
- 9:30 Belinski Vladimir (*20 minutes*)
Stationary Einstein-Maxwell Solitons
Bravetti Alessandro (*10 minutes*)
On The Correspondence Between Extremal Black Holes and real poles in the ISM for electro-vacuum
- 10:00 Arnett David (*30 minutes*)
What determines the Rotational State of a Collapsing Star?
- 10:30 coffee break
- 10:50 Rueda Jorge (*20 minutes*) and
Pugliese Daniela (*10 minutes*)
A general relativistic Thomas-Fermi treatment of neutron star cores
- 11:20 Rotondo Michael (*20 minutes*)
On the relativistic Thomas-Fermi treatment of compressed atoms and compressed nuclear matter cores of stellar dimensions
Boshkayev Kuantay (*10 minutes*)
On Magnetic Fields in Neutron Stars
- 11:50 Coppi Bruno (*30 minutes*)
Gedanken and Shining Black Holes



Villa Hanbury

Monday Afternoon - July 12

Chairperson: Song Doo Jong

- 14:30 Filippi Simonetta (*15 minutes*) and
Cherubini Christian (*15 minutes*)
Rotating Self-gravitating Systems and Clebsch Theory: the acoustic effective geometry approach
- 15:00 Zhang Chengmin (*30 minutes*)
Neutron Star Mass and Strong Gravity - Implications of kHz QPOs
- 15:30 Hyun Kyu Lee (*30 minutes*)
Structure of compact star with dense hadronic matter at the core
- 16:00 Coffee Break
- 16:20 Bini Donato (*20 minutes*)
Poynting-Robertson effect in black hole spacetimes
Haney Maria (*10 minutes*)
Neutron Stars Pulsations
- 16:50 Geralico Andrea (*20 minutes*) and
Pompi Francesca (*10 minutes*)
Einstein Clusters and Black Holes
- 17:20 Shuang-Nan Zhang (*30 minutes*)
On the nature of Z-sources: neutron star magnetic field, accretion disk structure and evolution
- 17:50 Mohammadi Rohoollah (*30 minutes*)
Solution to Thomas-Fermi equation in the presence of strong magnetic fields

Tuesday Morning - July 13
Large Scale Structure and Early Universe
Chairperson: Lee Chul-Hoon

- 8:30 Mo Houjun *(30 minutes)*
A Bayesian approach to the semi-analytic model of galaxy formation
- 9:00 Amati Lorenzo *(30 minute)*
Measuring cosmological parameters with GRBs
- 9:30 Einasto Jaan *(30 minutes)*
Large Scale Structure of the Universe - a powerful probe for fundamental physics"
- 10:00 Fang Li-Zhi *(30 minutes)*
Nonlinear evolution of cosmic baryon matter
- 10:30 coffee break
- 10:50 Rosquist Kjell *(30 minutes)*
Constraints of initial data for a discrete universe
- 11:20 Kleinert Hagen *(30 minutes)*
New Gauge Invariance of Gravity and the Fate of Torsion
- 11:50 Damour Thibault (20 minutes) and
 Lecian Orchidea Maria (10 minutes)
About the Statistical Properties of Cosmological Billiards



Villa Hanbury

Tuesday Afternoon - July 13

Chairperson: Farrock Vakili

14:30

15:00 Ferrari Chiara (20 minutes)
Non-thermal phenomena in galaxy clusters

15:30 Melchiorri Alessandro (20 minutes)
Cosmic Microwave Background Anisotropies: Current Status and prospects
Pandolfi Stefania (10 minutes)
Harrison-Zel'dovich primordial spectrum is consistent with observations

16:00 Coffee Break

16:20 Gao Yu (30 minutes)
Star Formation Laws in Galaxies

16:50 Kim Sung-Won (30 minutes)
Cosmological perturbation and Dark Energy

17:20 Chen Xuelei (30 minutes)
Topics in 21cm cosmology

17:50 Scardigli Fabio (15 minutes)
Pre-inflation matter era and the CMB power spectrum



Villa Hanbury

Wednesday Morning - July 14
Astroparticle Physics and Astrophysics
Chairperson: Einasto Jaan

- 8:30 Vissani Francesco (*30 minutes*)
Progresses in neutrino astronomy
- 9:00 Ruffini Remo (*30 minutes*)
Black holes in GRBs and galactic nuclei
- 9:30 Ruchayskyi Oleg
Sterile neutrino dark matter
- 10:00 Aharonian Felix (*20 minutes*)
Exploring galactic and extragalactic particle accelerators with X-rays, gamma-rays and neutrinos
Sahakyan Narek (*10 minutes*)
On the origin of high energy gamma-rays from giant radio lobes of Centaurus A.
- 10:30 Coffee Break
- 10:50 Chakrabarti Sandip (*30 minutes*)
Black Hole Accretion: How do the variable and outburst sources do it?
- 11:20 Cremonesi Oliviero (*30 minutes*)
Neutrinoless Double Beta Decay Searches
- 11:50 Belli Pierluigi – DAMA (*30 minutes*)
Particle Dark Matter in the galactic halo: results from DAMA/LIBRA



Villa Hanbury

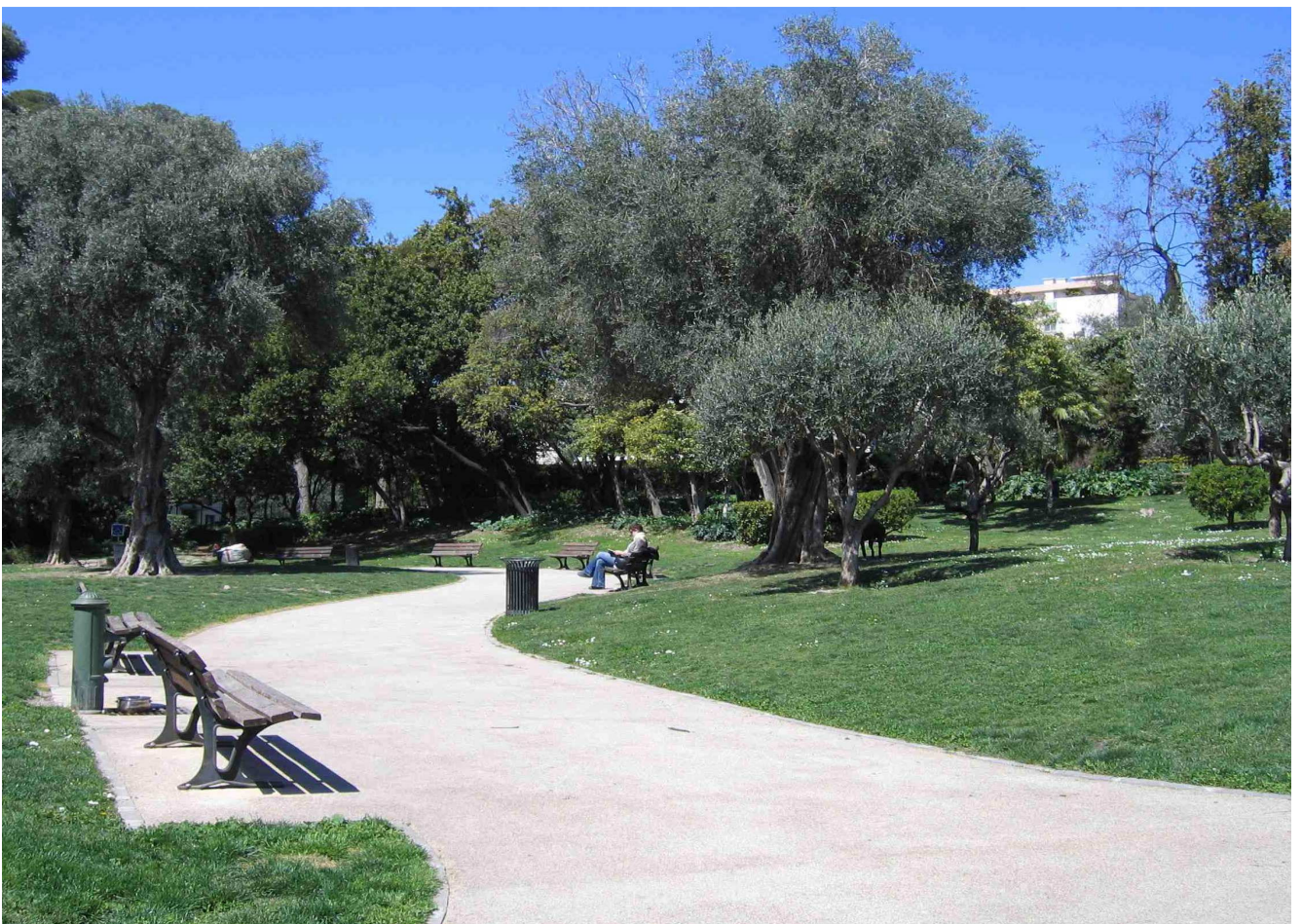
Wednesday Afternoon - July 14

Chairperson: Chardonnet Pascal

- 14:30 Yang Xiaohu (*30 minutes*)
The evolution of galaxies: central vs satellite
- 15:00 Pisin Chen (*30 minutes*)
Gauge Theory of Gravity with de Sitter Symmetry as a Solution to the Cosmological Constant Problem and the Dark Energy Puzzle
- 15:30 Bourguignon Jean-Pierre (*30 minutes*)
Ricci flow and the solution of the Poincaré conjecture by Grisha Perelman
- 18:00 July 14th Nice Parade
- 19:30 Visit at Villa Ratti
- 20:00 Banquet at the Observatoire de la Côte d'Azur



Villa Ratti and its garden



Thursday Morning, July 15, 2010
Ultra High Energy Sources and Gamma Ray Bursts
Chairperson: Harutyunyan Hayk

- 8:30 Nicolai Hermann (*30 minutes*)
Symmetries and Singularities
- 9:00 Boer Michel (*30 minutes*)
Rapid multi-wavelength observations of gamma-ray bursts
- 9:30 Frontera Filippo (*30 minutes*)
The time resolved spectra of Gamma Ray Bursts
- 10:00 Xue She-Sheng (*20 minutes*) and
Han Wenbiao (*10 minutes*)
Electron-positron pair oscillation in spatially inhomogeneous electric fields and radiation
- 10:30 Coffee Break
- 10:50 Vereshchagin Gregory (*20 minutes*)
Hydrodynamics of the optically thick phase in GRBs
De Barros Gustavo (*10 minutes*)
Numerical analysis of an optically thick plasma
- 11,20 Aksenov Aleksey (*20 minutes*) and
Siutsou Ivan (*10 minutes*) *RB*
Pair winds from compact objects with an application to GRBs
- 11,50 Izzo Luca (*30 minutes*)
The Ultra Relativistic GRBs



Observatoire de la Côte d'Azur

Thursday Afternoon - July 15

Chairperson: Kim Sang Pyo

- 14:30 Della Valle Massimo (*20 minutes*) and
Izzo Luca (*10 minutes*)
Wild and Weird Supernovae
- 15:00 Bernardini Maria Grazia (*20 minutes*)
Gamma-Ray Burst light curves and spectra within the Fireshell model
Patricelli Barbara (*10 minutes*)
High energetic GRBs and their spectral properties within the fireshell model
- 15:30 Pacheco Josè (*20 minutes*) and
Kanaan Chadia (*10 minutes*)
The energy distribution of gamma-ray burst revisited
- 16:00 Coffee Break
- 16:20 Bianco Carlo Luciano (*20 minutes*)
The fireshell equations of motion and the P-GRB observational properties
Caito Letizia (*10 minutes*)
The class of disguised short bursts: some examples
- 16:50 Arkhangelskaja Irene (*30 minutes*)
The characteristics of GRB with high energy component in their spectra
- 17:20 Aliev Alikram (*30 minutes*)
Observing Black Holes: Quasi-Periodic Oscillations
- 17:50 Lee Bumhoon (*30 minutes*)
Vacuum Bubbles and Gravity Effects
- Liu Wenbiao (*20 minutes*)
Tortoise coordinate transformation on apparent horizon of a dynamical black hole



Villa Hanbury

Friday Morning - July 16
**Scientific Space Missions and
International Cooperations (Brazilian-Chinese-French-Italian)**
Chairperson: Chen Xuelei

- 8:30 Piran Tsvi (30 minutes)
- 9:00 Braga Joao (30 minutes)
MIRAX: a Brazilian-Italian X-Ray Astronomy Mission for GRBs and X-Ray Transients
- 9:30 Feroci Marco (30 minutes)
The Italian scientific payload onboard MIRAX
- 10:00 Arnaud Jean (20 minutes)
Overview on Picard satellite mission
Sigismondi Costantino (10 minutes)
Methods to measure the solar diameter
- 10:30 Coffee Break
- 10:50 Mester John (20 minutes) and
Ferroni Valerio (10 minutes)
Space and superconducting techniques for General Relativity
- 11:20 Costa Enrico (30 minutes)
Relativistic Astrophysics with AGILE
- 11:50 Arkhangelsky Igor (30 minutes)
The application of the BrillanCe series scintillation detector in the spectrometer of neural particles in the satellite experiment ZINA-NT



Villa Hanbury

Friday Afternoon - July 16

Chairperson: Hyung Won Lee

- 14:30 Wang Zhaozhong and Jin Yong (30 minutes)
Nanotechnology in astrophysics
- 15:00 Lee Chul Hoon (30 minutes)
Nucleation and Dynamics of Vacuum Bubbles of a Self-Gravitating Scalar Field
- 15:30 Lee Da-Shin (30 minutes)
Quantum Noise in the Mirror-Field System: A Field Theoretic Approach
- 16:00 Coffee Break
- 16:20 Ng Kin Wang (30 minutes)
Effects of black holes to inflation perturbation
- 16:50 Hu Zhan (30 minutes)
Testing dark energy models and gravity theory with large imaging and spectroscopic surveys
- 17:20 Lee Wo-Lung (30 minutes)
Primordial Magnetic Fields by Cosmic Inflation
- 17:50 Gao Sijie (30 minutes)
Validity of thin shell models



University of Nice – Sophia Antipolis

List of Participants

Armenia

Aharonian, Felix
Harutyunyan Hayk
Sahakyan, Narek

Max-Planck Institute
Byurakan Astrophysical Observatory
LA SAPIENZA UNIVERSITY, DEPARTMENT OF PHYSICS

Austria

Gruber, Christine

JOHANNES KEPLER UNIVERSITY LINZ/NATIONAL TAIWAN UNIVERSITY

Belarus

Siutsou, Ivan

ICRANET

Brazil

Braga, João
De Barros, Gustavo
Mosquera Cuesta, Herman J.
Rangel Lemos, Luis Juracy

INPE
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ICRA-BR
ICRA - UNIVERSITY OF ROMA1 (LA SAPIENZA)

China

Chen, Xuelel
Gao, Liang
Gao, Yu
Gao, Sijie
Han, Wenbiao
Kang, Xi
Pan, Jun
Tang, Keyun
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Wu, Xiang-Ping
Xia, Xiaoyang
Yan, Jinzhong
Yang, Xiaohu
Zhan, Hu
Zhang, Chengmin
Zhang, Shuang-Nan
Zhang, Tong-Jie
Zheng, Qian

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ICRANET
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INSTITUTE OF HIGH ENERGY PHYSICS, CHINESE ACADEMY OF SCIENCE
NATIONAL ASTRONOMICAL OBSERVATORIES
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INSTITUTE OF HIGH ENERGY PHYSICS
DEPARTMENT OF ASTRONOMY
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Colombia

Guillen, Alfonso
Rueda Hernandez, Jorge A.

RESEARCHGATE SCIENTIFIC NETWORK
LA SAPIENZA UNIVERSITA' DI ROMA, ICRANET

Estonia

Einasto, Jaan
Hütsi, Gert

TARTU OBSERVATORY
TARTU OBSERVATORY

France

Arnaud, Jean
Boer, Michel
Chardonnet, Pascal
Damour, Thibault
Ferrari Chiara
Jin, Yong

UNIVERSITY OF NICE
OBSERVATOIRE DE HAUTE PROVENCE
UNIVERSITY OF SAVOIE
IHES
OCA
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Remo Ruffini and Xiaoyu Hong, Director of the Shanghai Observatory
XuGuangqi Monument – 27 October, 2009
in the background, Prof. Rosquist from Stockholm University

Kanaan, Chadia	OBSERVATOIRE DE LA COTE D'AZUR
Lecian, Orchidea Maria	IHES
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Haney, Maria	DIPARTIMENTO DI FISICA, UNIVERSITA DI ROMA "LA SAPIENZA"
Nicolai, Hermann	MPI FUER GRAVITATIONSPHYSIK
India	
Chakrabarti, Sandip	S.N. BOSE NATIONAL CENTRE FOR BASIC SCIENCES
Verma, Murli Manohar	LUCKNOW UNIVERSITY
Iran	
Mohammadi, Rohoollah	ICRANET
Ireland	
Aharonian, Felix	DIAS INSTITUTE FOR ADVANCED STUDIES
Italy	
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Belli, Pierluigi	INFN - ROMA TOR VERGATA
Belinski, Vladimir	ICRANET
Belvedere, Riccardo	SAPIENZA - UNIVERSITÀ DI ROMA
Benedetti, Alberto	UNIVERSITY OF PAVIA
Bernardini, Maria Grazia	INAF - OSSERVATORIO ASTRONOMIC DI BRERA
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Capaccioli, Massimo	UNIVERSITY OF NAPLES FEDERICO II
Cerini, Giulia	UNIVERSITÀ "LA SAPIENZA"
Cherubini, Christian	CAMPUS BIOMEDICO
Costa Enrico	UNIVERSITY OF ROME
Cremonesi, Oliviero	INFN
Della Valle, Massimo	CAPODIMONTE ASTRONOMICAL OBSERVATORY, INAF-NAPOLI & ICRANET
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Ferroni, Valerio	ICRA
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Pizzio, Francesco	BOLOGNA UNIVERSITY
Pompi, Francesca	UNIVERSITÀ LA SAPIENZA ROMA, ICRA



Participants of the 1st Galileo-XuGuangqi meeting
26 – 30 October, 2009 - Shanghai

Pugliese, Daniela	UNIVERSITÀ LA SAPIENZA ROMA, ICRA
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Vissani Francesco	LNGS
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Kerr Roy	ICRANET
Kazakhstan	
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Abishev, Medeu	KAZAKH NATIONAL UNIVERSITY
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Kim, Sung-Won	EWHA WOMANS UNIVERSITY
Lee, Bumhoon	SOGANG UNIVERSITY
Lee, Chul Hoon	HANYANG UNIVERSITY
Lee, Hyun Kyu	HANYANG UNIVERSITY
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Arnett, David	ARIZONA UNIVERSITY
Coppi, Bruno	MIT

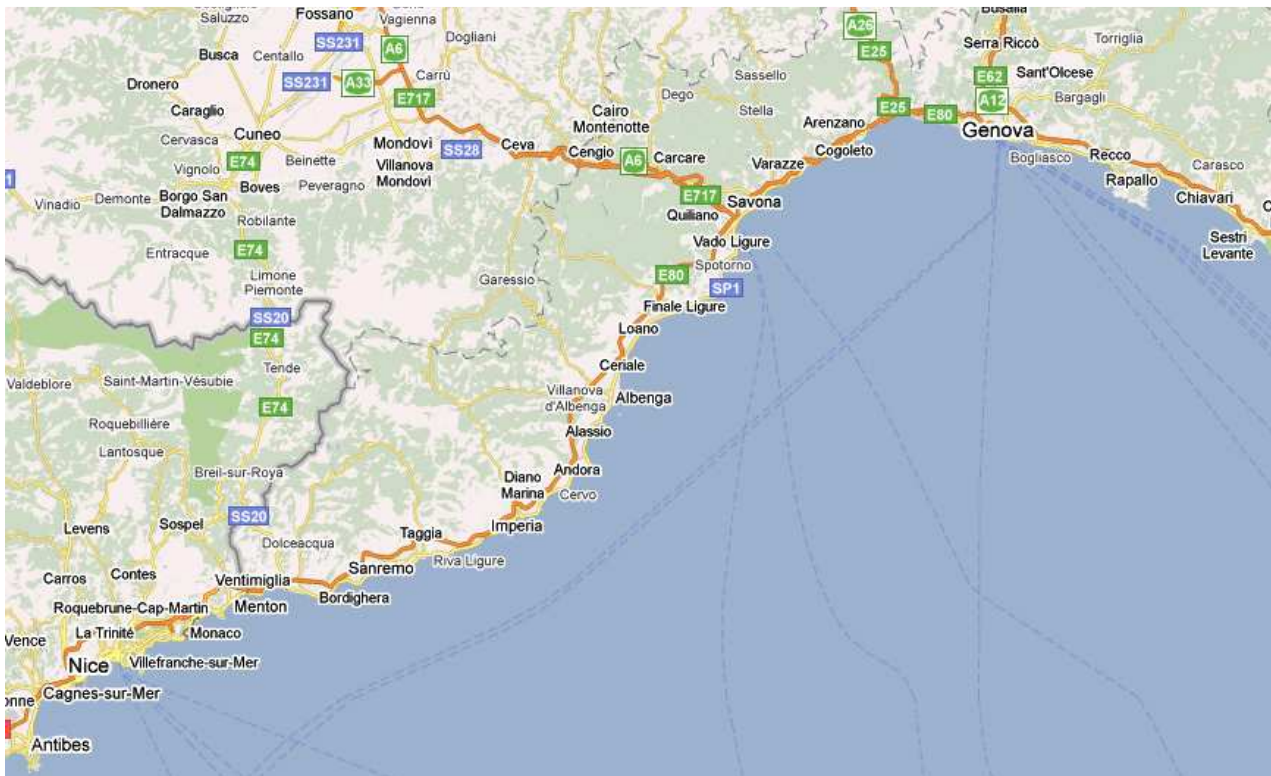
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Mester John
Mo, Houjun
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TEXAS A&M UNIVERSITY

Uzbekistan

Ahmedov, Bahodir

NATIONAL UNIVERSITY OF UZBEKISTAN



Sir Thomas Hanbury



Thomas Hanbury was born in Clapham and went out to Shanghai as a young man at the height of the Opium Wars to make his fortune. But unlike most of his compatriots Hanbury was a Quaker of high moral principle who thought the British treated the Chinese appallingly and wasn't afraid to stand up for what he thought was right. The Chinese came to adore him, since he did everything he could to help and support them. The British were less keen, but he was so successful (and stubborn) they had to listen to what he said. Having made his money, Hanbury then got married and retired to the Italian Riviera where he set about creating a fantastic garden called La Mortola, one of the finest in Europe.

据《上海地方志》记载,汉璧礼,

英国人。1853年来华,在上海与人合开宝威汉璧礼洋行,经营房地产致富。1865年当选为公共租界工部局董事,对公共事业十分关注。1871年捐资创办拥有100间房屋的欧亚混血儿学校,教育欧亚旅沪混血儿,并成立一个委员会管理该学校。后又创办水手饭店。同年离沪到法国定居。1882年,提出以只收欧亚混血儿及其名字命名为条件,将所办学校赠给工部局,工部局以还不具备接收条件为由予以回绝,但开始对该学校实行年度资助。1889年,将欧亚混血儿学校与新成立的儿童之家合并,成立汉璧礼蒙养学堂。1890年,公共租界工部局接收该学堂,改为汉璧礼公学,成为工部局第一所局立公学。1891年,又在蓬路为该校修建新校舍。而该校学生也从欧亚混血儿扩大至多个国籍的贫困儿童。1893年曾回上海,捐助5000两给慈善机关,工部局因此以其名字命名了界内一条马路。



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IRAP Ph.D. ERASMUS MUNDUS - 2010

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IRAP Ph.D. Erasmus Mundus September school

The September School in Nice is the first set of lectures delivered by the world experts in General Relativity, Relativistic Field Theory and Relativistic Astrophysics to the students of Erasmus Mundus IRAP PhD program.

The lectures will include courses on:

- Cosmological Singularity
- Kerr Metric and its Generalizations
- Introduction to Cosmology
- Large Scale Structure
- Relativistic Kinetic Theory
- Supernova
- Introduction to X-ray Binaries and Accretion processes around black holes and neutron stars
- Multivalued Fields in Condensed Matter, Electromagnetism, and Gravitation
- Open Issues in High Energy Astrophysics and Needed X/Gamma-Ray Instrumentation
- Numerical Relativity
- Numerical methods in Astrophysics
- Gravitational Radiation and Binary Systems
- Electron-positron pairs creation and dynamics in external electric fields

as well as seminars by the students of ongoing IRAP PhD Program.

The lectures will be held in **University of Nice-Sophia Antipolis**.



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Lectures of the Erasmus Mundus IRAP PhD program, September 2010
Park Valrose, University of Nice Sophia Antipolis

	09:00-10:15	10:15-10:30	10:30-11:45	11:45-13:00	12:30-16:00	16:00-17:15	17:15-17:30	17:30-18:45
06.09	Opening	Coffee break	Einasto	Hütsi	Lunch	Mignard	Coffee break	Mignard
07.09	Kerr/Bini		Einasto	Hütsi		Rueda		Koppitz
08.09	Kerr/Bini		Einasto	Hütsi		Rueda		Koppitz
09.09	Kerr/Bini		Einasto	Hütsi		Rueda		Koppitz
10.09	Kerr/Bini		Einasto	Hütsi		Rueda		Koppitz
13.09	Bianco		Frontera	Kobayashi		Palmkvist		Koppitz
14.09	Amati		Frontera	Kobayashi		Palmkvist		Koppitz
15.09	Amati		Frontera	Farinelli		Damour		Koppitz
16.09			Bianco	Kobayashi		Damour		Koppitz
17.09	Damour		Bianco	Kobayashi		Palmkvist		Koppitz
20.09	Belinski		Della Valle	Kleinert		Vereshchagin		Chakrabarti
21.09	Belinski		Della Valle	Kleinert		Vereshchagin		Chakrabarti
22.09	Belinski		Della Valle	Della Valle		Della Valle		Chakrabarti
23.09	Belinski		Rosati	Vereshchagin		Rosati		Chakrabarti
24.09	Vereshchagin		Rosati	Belinski		Rosati		Chakrabarti
								Concluding remarks

Opening by:

President of the University of Nice Sophia Antipolis Prof. Albert Marouani

Director of the IRAP Erasmus Mundus PhD Prof. Remo Ruffini

Coordinator of the IRAP Erasmus Mundus PhD Prof. Pascal Chardonnet

Concluding remarks:

Director of the IRAP Erasmus Mundus PhD Prof. Remo Ruffini

Cosmological Singularity
Vladimir Belinski
ICRANet

Lecture 1

Synchronous reference system. Definition of the general solution. Physical and fictitious singularities.

Lecture 2

Kasner solution and its inhomogeneous generalization. Instability of Kasner dynamics.

Lecture 3

Orthogonal frames. Homogeneous spaces. Bianchi classification.

Lecture 4

Bianchi II model. Transition to the new Kasner regime. Diagonal Bianchi IX model. Oscillatory regime. Stochasticity.

Lecture 5

Non-diagonal Bianchi IX model and its inhomogeneous generalization. Rotation of Kasner axis. Orthogonal frame axis. Iwasawa decomposition. Freezing phenomenon.

Lecture 6

Influence of matter. Perfect liquid. Stiff matter state. Scalar field. Electromagnetic field. Yang-Mills fields.

Lecture 7

Multidimensional space. Pure Gravity.

Lecture 8

Supergravity models. Influence of p-forms and dilatons.

Lecture 9

Cosmological billiard. Coxeter simplex. Kac-Moody Lie algebra. Hidden symmetry conjecture.

Lecture 10

Dynamical systems approach. Mixmaster attractor.

Multivalued Fields in Condensed Matter, Electromagnetism, and Gravitation
Hagen Kleinert
Free University of Berlin

Lecture 1

Field Quantization: Nonrelativistic Fields, Scalar Fields, Dirac
Fields, Majorana Fields

Lecture 2

Effective Actions of Various Field Theoretic Lagrangians,
Connectedness Structure of Feynman Diagrams

Lecture 3

Ginzburg-Landau Theory of Phase Transitions.
Superfluidity, Superconductivity, Melting

Lecture 4

Random Walks and Disorder Field Theory. Disorder Field Theory of
Superconductor, of Melting

Lecture 5

Bose-Einstein Condensation

Lecture 6

Multivalued Field Theory of Magnetism

Lecture 7

Defects and Geometry

Lecture 8

World Crystal Model of Universe

Relativistic Kinetic Theory and its Applications in Astrophysics and Cosmology

Gregory Vereshchagin

ICRANet

Lecture 1. Introduction and basic concepts

Density of particles in the phase space. Averaging, macroscopic quantities. One particle distribution function. Moments of DF, entropy flux and hydrodynamic velocity. Boltzmann equation with binary collisions. Cross-section.

Lecture 2. Conservation laws and equilibrium

Conservation laws. H-theorem. Local and global equilibrium. Number density, energy density and pressure in equilibrium.

Lecture 3. Gases and plasmas

Klimontovich DF for many-body systems. Liouville theorem and BBGKY hierarchy. Physical scales and approximations. Binary collisions and equilibrium in gases. Landau collision integral for plasmas. Collisionless Vlasov equation. Landau damping

Lecture 4. Pair plasma

Pair plasma in GRBs. Interactions in hot dense plasma. Collision integrals. Kinetic and thermal equilibria. Relaxation timescales evaluation. Relaxation timescales for the pair plasma with proton admixture.

Lecture 5. Collisionless and selfgravitating systems

Plasma instabilities. Collisionless shocks. Lynden-Bell violent relaxation. Jeans instability in collisionless system. Hierarchical clustering and dark matter halos.

Numerical Relativity
Michael Koppitz
Max-Planck-Institut für Gravitationsphysik
Albert-Einstein-Institut

During the last few decades numerical relativity has become one of the most important analysis tools in general relativity. Dynamical solutions such as the two-body problem have attracted special attention and led to major advances in the numerical treatment of Einstein's equations. Especially new gauge choices found recently created a breakthrough and have ignited a wave of new results and both fundamental understanding and astronomical applications.

During the lecture we will address the basic ideas such as the 3+1 split, re-formulations of the equations, the importance of gauge choices, and a selection of analysis tools together with recent results.

1. Motivation / Introduction
2. The 3+1 Split
 2. 1. Electrodynamics
 2. 2. Einstein's Equations
3. Evolution Systems
 3. 1. The ADM equations
 3. 2. The BSSN equations
4. Initial data
 4. 1. The York-Lichnerowicz Decomposition
 4. 2. Misner, Brill-Linquist, Bowen-York, and Puncture Data
 4. 3. The Thin Sandwich Decomposition
5. The Gauge Choices
 5. 1. The Importance of Slicing Conditions
 5. 2. The Shift Vector
6. Gravitational Waves
 6. 1. Linearized Einstein Equations
 6. 2. Weyl-Tensor and Newman-Penrose quantities
7. Horizon Finding
 7. 1 Event Horizons
 7. 2 Apparent Horizons
 7. 3 Isolated Horizons
8. Things we didn't talk about
 8. 1. Matter
 8. 2. Boundary Conditions
 8. 3. Alternative Formulations
 8. 4. Numerical Issues
9. Visualizations

Open Issues in High Energy Astrophysics and Needed X/Gamma-Ray Instrumentation
Filippo Frontera
University of Ferrara

The lectures will concern an excursus of the instrument development since the first discovery of Sco-X1 by Giacconi et al. (1962) up to the nowadays instrumentation.
I will argue the instrumentation development excursus by discussing the science objectives that stimulated the new developments, and, conversely, the instrumentation that stimulated the science objectives.

**Introduction to X-ray Binaries and Accretion processes around black holes
and neutron stars**
Sandip Chakrabarti
S.N. Bose National Center for Basic Sciences

1. Formation and classification of X-ray Binaries
2. Properties of X-ray binaries
3. Relativistic hydrodynamics around black holes and neutron stars
4. Radiations emitted from accreting matter: Observations vs. theory

Introduction to Cosmology
Gert Hütsi
(Tartu Observatory, ICRANet)

PART I: the homogeneous and isotropic Universe (Lectures 1-3)

Cosmological Principle. Hubble's law. Metrics of the homogeneous-isotropic space-times. Kinematics: distances, horizons etc. Dynamics: Friedmann equations. Matter-energy content of the Universe. Probes of the homogeneous isotropic expansion. Thermal history of the early Universe: baryogenesis, neutrino decoupling, $e^\pm$ annihilation, Big Bang nucleosynthesis, recombination. Problems with the Big Bang model. Inflation.

PART II: the clumpy Universe (Lectures 4-5)

Initial conditions. Linear evolution. Quasi-nonlinear evolution. Nonlinear evolution. Probes of cosmic fluctuation fields.

Numerical methods in Astrophysics
Shiho Kobayashi
Astrophysics Research Institute, Liverpool John Moores University

In the series of lectures, we discuss basic numerical algorithms for solving ordinary differential equations and partial differential equations (mainly wave equations) in astrophysical context. I first explain how to numerically solve equations of motion, and show how it could be used in actual astrophysics research by using an example of Hyper-velocity Stars (Massive black hole - binary interaction). The second part is about wave equations. We examine the advection equation and its mathematical properties. Then we show how such advection algorithms are used for solving the equations of hydrodynamics. Then we proceed with Riemann solver algorithms and relativistic implications (e.g. Gamma-Ray Bursts).

Gravitational Radiation and Binary Systems

Thibault Damour

IHES & ICRANet

The course will review several aspects of the theory of gravitational radiation: definition, generation by material systems, propagation, multipolar decomposition, radiation reaction, multipolar post-Minkowskian formalism, asymptotic behaviour, emission by binary systems, interface between analytical relativity and numerical relativity, the effective one body formalism, experimental evidence for the reality of gravitational radiation from binary pulsars,...

Kjell Rosquist
Stocholm University and ICRA.Net

Lecture 1. Exact solutions of the Einstein equations with rotation, charge and cosmological constant

Physical properties of the most important exact vacuum solutions of the Einstein equations will be discussed. The solutions treated are the charged generalizations of Schwarzschild and Kerr, also including a cosmological constant. Applications for the solar system and for cosmology will also be given.

Lecture 2. The physics of gravitomagnetism

We describe how the gravitational field of a rotating source can be decomposed in gravitoelectric and gravitomagnetic parts. In particular we consider the expansion in multipole moments and how it differs from the Newtonian case. The gravitomagnetic fields of various physical sources will also be discussed.

Large Scale Structure
Jaan Einasto
Tartu Observatory & ICRANet

Introduction to large scale structure

Short history of the Universe. 2-dimensional data on the structure of the Universe. 3-dimensional data on the structure of the Universe. Modern surveys of galaxies.

Methods of the analysis of the LSS

Testing structure formation theories. Correlation function; clustering analysis; percolation test; void probability function. Bias analysis. Luminosity function of galaxies, clusters and superclusters. Luminosity density field and its use to find superclusters.

Dark Matter

Local dark matter and global dark matter. The Dark Matter Story: first detections in clusters of galaxies and in the Galactic disk; galactic models; extended rotation curves; x-ray data, gravitational lensing. Nature of dark matter: density of baryonic matter, CMB data on density fluctuations; Hot Dark Matter (neutrinos), Cold Dark Matter (axions?); alternatives to DM.

Cosmological parameters and Dark Energy

Expansion of the Universe and density of matter. Data from CMB radiation temperature fluctuations, large-scale distribution of galaxies, distant supernova analysis. Evidence for Dark Energy.

Structure formation and evolution

Numerical simulations of the structure formation and evolution. Zeldovich pancake scenarios and Peebles hierarchical clustering scenario. Comparison of models with observations. Luminosity density field and its wavelet decomposition. Formation of first stars and galaxies. Influence of density perturbations of various scales.

Electron-positron pairs creation and dynamics in external electric fields

She-Sheng Xue

ICRANet

Reference: ``Electron-Positron pairs in Physics and Astrophysics: from heavy nuclei to black holes'' R. Ruffini, Gregory Vereshchagin, She-Sheng Xue, Phys. Rep. 481, 1 (2010).

Lecture 1. (45 minutes): relativistic Dirac theory for the electron and positron pair, and introduction to the vacuum, pair - creation and annihilation.

Lecture 2. (45 minutes): the WKB-approach to the rate of electron-positron pair-creation in uniform electric fields, generalized to electromagnetic fields by field invariants under Lorentz and duality transformations.

Lecture 3. (45 minutes): the rate of electron-positron pair-creation in non-uniform electric fields. Some applications.

Lecture 4. (45 minutes): back-reaction: the electron-positron oscillation in external electric fields.

Lecture 5. (45 minutes): the electron-positron oscillation and annihilation in external electric fields.

Clusters of Galaxies

Piero Rosati
ESO

- Distribution of Baryons and Dark Matter in clusters
- Determination of cluster masses and mass density profiles; mass determination methods: Gravitational Lensing and hydrostatic equilibrium
- Use of clusters as probe of structure formation and cosmology:
 - formation and evolution of hot (ICM) and cold baryons (cluster galaxies)
 - cosmological parameters from cluster abundance and baryon fraction
- Current and future cluster surveys from the millimeter to X-ray wavelengths

Supernova
Massimo Della Valle
INAF - Astronomical Observatory of Capodimonte

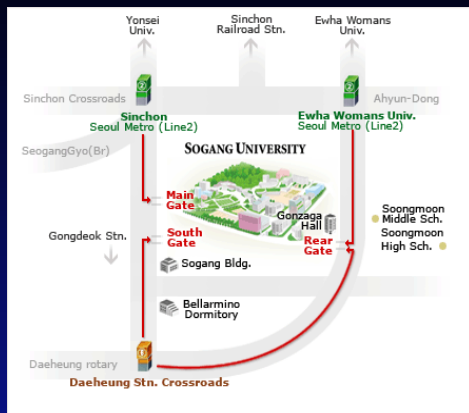
- Lecture 1. Historical background
- Lecture 2. General Properties
- Lecture 3. Explosive Mechanisms
- Lecture 4. Supernovae and Gamma-ray Bursts
- Lecture 5. Supernovae and Cosmology

How to reach Sogang University

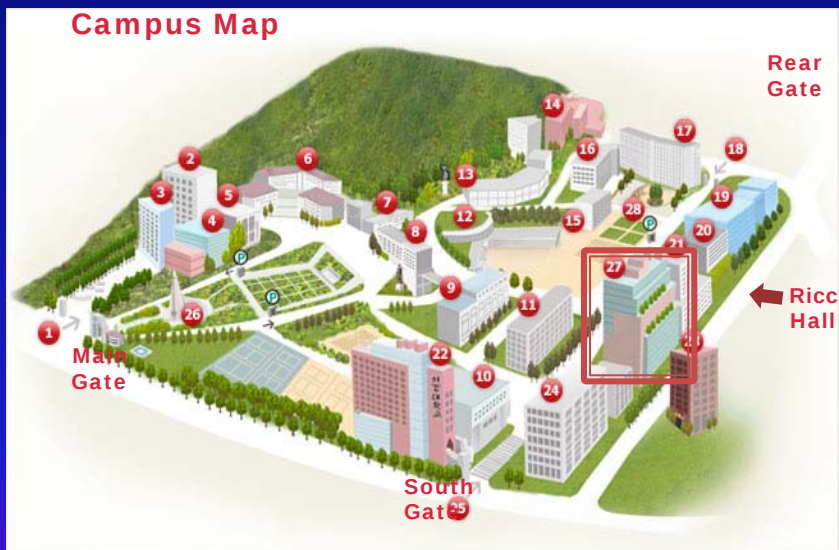
Subway

take the green line number 2 and get off at "Sinchon" (stop #240), get out exit 6 and you can arrive at main gate within 5 minutes on foot.

Or take the brown line number 6 and get off at "Daeheung" (stop #625), get out exit 1 and you can reach the south gate within 8 minutes on foot.



Campus Map



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KOREA-ITALY Lecture on



MATTEO RICCI, GALILEO, XU GUANGQI: MESSENGERS OF THE EUROPEAN CULTURE IN THE EASTERN WORLD

*Lecture on 400th anniversary of
Matteo Ricci's death*



October 22nd (Fri), 2010, 14:30-15:30
404, Ricci Hall, Sogang University, Seoul

Entry Fee: Free

Organized by



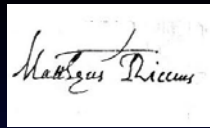
Sogang University



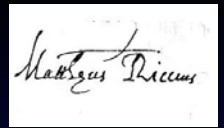
Embassy of Italy - Office of Science and Technology



Italian Cultural Institute (Seoul)



October 22nd (Fri), 2010



Remo J. RUFFINI

La Brigue, France, May 17, 1942.
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1966 Doctorate in Physics, University of Rome, Italy
1967-1968 Postdoctoral fellow Palmer Physics Lab. Princeton University, N.J.
1970-1971 Instructor, Princeton University and (1971-1974) Assistant Professor
1975 Visiting professor, Kyoto University, Japan and Nedlands Western Australia University (Australia)
1976-1978 Professor, University of Catania, Italy
1978-present Professor, Chair of Theoretical Physics, University of Rome "La Sapienza"
1984-present Chairman Intern. Org. Committee of M.Grossmann Meetings and since '85 Editor of the series "M.Grossmann meetings on Relativistic Field Theories"
1985-present President International Center Relativistic Astrophysics (ICRA)
1986-89 Member of Task Force Scientific Use of Space Station NASA, Washington
1989-1993 President of the Scientific Committee of the Italian Space Agency, Rome
1987-present Co-Chairman Italian-Korean Meeting on Relativistic Astrophysics
1992-present Editor Intern. Journal Modern Physics D World Scientific Singapore
2005-present Director of ICRANet

Founding Member of European Physical Society
Co-Editor of the Series "Italy-Korea meetings on Relativistic Astrophysics"
Fellow recipient of several International awards.
Author of some hundreds publications ("Black Holes", with J.Bardeen et al. in 1973, and "Black Holes, Gravitational waves and Cosmology" with M.Rees and J.A.Wheeler in 1974) and books ("Gravitation and Spacetime" (with H.Ohanian) translated in several languages).

**MATTEO RICCI, GALILEO, XU GUANGQI:
MESSENGERS OF THE EUROPEAN CULTURE
IN THE EASTERN WORLD**

*Lecture on 400th anniversary of
Matteo Ricci's death*



Matteo Ricci, Italian Jesuit missionary, explorer and Scientist, was born in Macerata on October 6, 1552 and died in Beijing (China) on May 11, 1610, 400 years ago.
Matteo Ricci introduced Christianity to China. He was born from a noble family, and joined the Jesuits Order after studying law in Rome.
He volunteered for missionary work overseas, arrived in Goa in 1578, and proceeded to China in 1582. China's interior was closed to foreigners when he arrived, but his willingness to adopt the Chinese language and culture gave him entry.
In 1597 he was appointed director of Jesuit activities in China.
In 1599 he settled in Nanjing, where he studied astronomy and geography.
In 1601 he was admitted to Beijing, where he preached the Gospel, taught science to scholars, and translated Christian works into Chinese.
When Matteo Ricci died, 58, the emperor of China granted him a plot of land for his tomb, which had never before happened in Chinese history.



Italian Embassy

Office of Science
Seoul, Republic of Korea
Dr. Antonino Tata
Seoul, 25 October 2010

CONFERENCE BY PROF. RUFFINI FOR THE CELEBRATION OF MATTEO RICCI (Sogang University, Seoul, 22 October 2010)

Summary

On October 22nd, 2010, in the frame of events for celebrating the Fourth Centenary of Father Matteo Ricci's death, the conference "Matteo Ricci, Galileo, Xu Guangqi: Messengers of the European Culture in the Eastern World" has been held by Prof. Remo Ruffini, relativistic astrophysicist of world renown but also great expert of Matteo Ricci's work. The Conference was planned at the Sogang University in Seoul, by the Office of Science and Technology and by the Italian Institute of Culture and offered an extraordinary analysis of Matteo Ricci's thought and life, both reconstructing the historical path and comparing his work to that of two contemporary scientists: Galileo in Italy and Xu Guangqi in China. Prof. Ruffini recalled that the modern astrophysics was born in those years, then from the Fifties it changed in relativistic astrophysics; Prof. Ruffini is one of the most important international protagonists of many relevant results.

1. On October 22, 2010 the conference "Matteo Ricci, Galileo, Xu Guangqi: Messengers of the European Culture in the Eastern World" has been held in Seoul, in the frame of the celebrations for the fourth centenary of Father Matteo Ricci's death.
2. The conference was promoted by the Office of Science and Technology of the Embassy and the Italian Institute of Culture in Seoul, and jointly planned by the Sogang University in Seoul, Jesuit Institution, that hosted the event in the "Ricci Hall".
3. The speaker has been Prof. Remo Ruffini, Professor at the University of Rome "La Sapienza" and Director of ICRANet ("International Center for Relativistic Astrophysics Network") in Pescara. Prof. Ruffini is a theoretical astrophysicist of world renown, particularly for his studies on Black Holes lead from the Seventies with the American scientist Wheeler; he is well-known in Korea having been, for more that 30 years, promoter of astrophysics in Korea (his first lecture was held in the above-mentioned "Ricci Hall" 33 years ago).
4. The planned conference is inserted in a series of activities where the Embassy showed its attention to Astronomy and Astrophysics: it follows the celebrations of the 2009 International Year of Astronomy and the Italo-Korean Symposia on Relativistic Astrophysics, started on 1987; the 11th edition was held in Seoul on November 2009.

5. Before the conference, the Scientific Responsible of the Embassy, Dr A. Tata, made an introduction recalling that Matteo Ricci has been messenger of faith, supporter of scientific knowledge and, therefore, the first figure of scientific European and Italian responsible in the East. The Vice-President of the Sogang University, Father Prof. Jung-Taek Kim, showed the gratitude of the Sogang University to the Embassy for the organization of this event and to Prof. Ruffini for being an excellent speaker.
6. In the presence of more than 100 people, mainly students and teachers of Physics, Prof. Ruffini presented the figure of Matteo Ricci as a scientist and missionary. Prof. Ruffini reconstructed the Jesuit formation of Matteo Ricci and his first studies in mathematics and astronomy, linking them to the western (Aristotle, Tolomeus, Clavius) and eastern knowledges (Yixing and Korean and Chinese astronomical observations) which are the basis of science in 600, also showing a rare original edition of an Aristotle book of 1551, expressly brought from Italy. Matteo Ricci's travels through Europe and Asia (particularly India), before the arrival in China, have been described in details, in order to analyse then the strong and decisive relationship he had with the Emperor Wan Li and the Chinese scientist Xu Guangqi. Matteo Ricci (Ri Ma To in Chinese) particularly excelled in cartography ; some bulky (and heavy) books by Matteo Ricci, belonging to the private collection of Prof. Ruffini, bravely brought in Korea, have been showed in order to better appreciate the extraordinary ability of Ricci as a cartographer.
7. In the second part of his conference, Prof. Ruffini presented Ricci as an astronomer, confirming that the first "Perspicillum" (telescope) was brought to China by Father De Ursis just 7 years after "Annus Mirabilis", on 1609, when the "Sidereus Nuncius" by Galileo Galilei was published, thus ratifying the birth of modern astrophysics.
8. The next application of General Relativity by Einstein to Astrophysics for a better understanding of the universe, the studies by Yukawa, by Wheeler and Ruffini himself in Princeton in the Seventies, represented the final part of the Conference. The story of extraordinary discoveries (pulsars, black holes, gamma ray bursts, gravitational waves, the cosmological models for the study of dark energy and matter, etc.) has been presented by one of the major protagonist of modern astrophysics, as a result of the teaching spread to the world 400 years ago by scientists like Galileo, Matteo Ricci and Xu Guangqi.