



Festival della Scienza

Exhibitions, laboratories and exhibits

Exposition

Biodiversity. The motor of life

Biodiversità. Il motore della vita

Museo Civico di Storia Naturale "G.Doria"

October 28 – September 25, 2005

Tuesday to Friday, 9 am - 7 pm, Saturday and Sunday, 10 am - 7 pm

Special opening times during the Festival: Monday November 1, 10 am - 7 pm, and Monday November 8, 9 am - 7 pm

The exhibition, which is an initiative of Genoa's Civic Natural History Museum, is a sort of narrative that starts from the origins and the evolution of life, and accompanies the visitor through the immense variety of living forms, and the importance of biodiversity for the economics of our planet, to help him to understand that, as David Ehrenfeld said, "every species has an undeniable right to exist, for the sole reason that it does exist." A lively, modern setting and pictures with a visual and emotional impact (prepared by Discovery Channel), make the visit interesting and accessible to everyone.

Booking is obligatory for schools and groups (see "General Information" section).

Sponsored by: **Compagnia di S.Paolo**

Exposition

Biomedicine and health

Biomedicina e salute

Loggia dei mercanti

October 15 – November 3, 2004

Every day, 10 am - 7 pm

A "journey through the human body" by means of a constant dialogue between historical references and up-to-date documents. The visitor can enter the world of biomedical science through the various sections of the exhibition (Biotechnologies, Neuroscience, Bio-images, Medicine, Surgery, Paediatrics and Pharmacology), tackling a number of practical tests and using interactive work stations.

Free admission.

Project developed by **Genoa University**

Exposition

Building methods in the Mediaeval portfolio of Villard de Honnecourt. The empirical knowledge of the past seen in the light of scientific knowledge



I modi di costruire nel taccuino medievale di Villard de Honnecourt. Il sapere empirico del passato visto attraverso la conoscenza scientifica

Museo di Sant'Agostino

from October 30 to 30 January, 2005

Tuesday to Friday, 9 am - 7 pm. Saturday and Sunday, 10 am - 7 pm. Monday closed.

The three sections of the exhibition (1. The Mediaeval portfolio of Villard de Honnecourt, 2. The instruments used by stonemasons and carpenters, 3. The "practical knowledge" of builders in the past) illustrate the skills of ancient builders, interpreting their simpler and more complex aspects by scientific knowledge. This is done by taking inspiration from an extraordinary 13th century document, the Portfolio of sketches and notes of Villard de Honnecourt, which illustrates the empirical knowledge that made it possible to build the great mediaeval cathedrals.

The exhibition is linked to the lecture by Tiziano Mannoni and Dominique Stroobant titled "The empirical knowledge of the past seen through scientific knowledge", (October 29, 4 pm).

Prepared by: Department of Architectural science of Genoa University, Institute of History of Material Culture of Genoa, Sant'Agostino Museum (City of Genoa).

In collaboration with: Edoardo Benvenuto Association, DIRAS (Department of Italian Studies, Romance Philology, Arts and Theatre) of Genoa University.

Exposition

By wire and by symbol. Italian ingenuity and the information society

Per fili e per segni. Ingegno italiano e società dell'informazione

Fiera del Mare – Pavilion D

November 3 – December 31

Every day from 10 am to 6 pm.

A great exhibition, the most important event in the ICT sector ever organised in Italy: to communicate the potential of informatics applied to telecommunications, and to underline Italy's contribution. Opening a constructive dialogue that will enable Italy to emerge again.

There are numerous events grouped into three main themes: the past, present and future of ICT; conferences on the current situation in the sector, called "Lights and shadows"; seminars and themed workshops – over 50 to date – held in the lecture hall of the exhibition.

For more information: ANTEA, tel. (39) 010 5958587

Booking is obligatory for schools and groups (see "General Information" section).

Organised by: Aica (Italian Association for I.T. and automatic calculation) and Fida (National Federation of professional information management associations)

In collaboration with: Ministry of Education, Universities and Research



Event

The challenge of numbers

Sfida con i numeri

Sala gioco del lotto – Magazzini del Cotone module 1 2th floor

October 28 – November 8

Monday to Friday 9 am – 7 pm, Saturday and holidays 10 am – 8 pm

A large board game, in which the players-chips have to solve mathematical problems, answer questions on the history and traditions of Lotto (which was born in Genoa) and guess whether their interlocutors are telling the truth or not. This allows them to progress and to participate in the extraction of the final prizes.

Plus: chess for three players and meetings with experts, every day at 5.30 pm.

Booking is recommended for schools and groups (see “General information” section)

Sponsored by: **Gioco del Lotto - Lottomatica**

Exhibition

The enchantment of science

L'incanto della scienza

Magazzini del cotone, module 2, 3rd floor

October 28 – January 6

Monday to Friday, 9 am - 7pm, Saturday and holidays 10 am - 8 pm

A fascinating journey through science and art, the rational and the imagined. A selection of 30 photographs that present the work of Felice Frankel, the American photographer and MIR researcher, in Italy for the first time; she is famous for having created a *visual vocabulary* of science and for having reassessed the full importance of the visual element in communication.

There are thirty of the photographer's work on show, bearing witness to the extraordinary (and often hidden) beauty that can lie behind scientific research, but they also offer a way that is both modern and provocative to bring the public face to face with a universe that otherwise runs the risk of remaining closed, “off-limits” to all but a small circle of scholars.

Booking is obligatory for schools and groups (see “General Information” section).

Sponsored by: **Gioco del Lotto - Lottomatica**

Event

Essential. European Science Festival

Magazzini del cotone, module 1 and module 5

October 28 - November 8

Every day, 9 am – 7 pm



Becoming a palaeontologist for a day, discovering the microbes responsible for an outbreak of food poisoning, studying the composition of rocks, seeing how our brain “tricks” us, entering the world of dynamics and ballistics: all this is made possible by exhibits proposed at the Festival by 5 countries in the context of a network funded by the European Commission.

The project comprises the initiatives described below.

The files of the various initiatives can be found in the site <http://esciential.festivalscienza.it>

Schools and groups can book visits to the Esciential exhibitions and laboratories in the following packages: “Esciential. Palaeontology”, which includes the exhibition “Remains and traces” and the laboratory “The profession of palaeontologist”; “Esciential. Neuroscience, ballistics and dynamics”, which includes the exhibitions “The brain that lies”, “From Archimedes to Poincaré: dynamics in a multimedia process” and “Jurij Georg Vega, artillery and logarithms”. The “Microbes” and “Secrets of the rocks” laboratories can be booked separately.

Presented by: Progetto Italia

Exposition

Esciential. Brain Waves – The brain that lies

La mente che mente

Magazzini del cotone, module 5

We often see only what we want to see and occasionally our brain “tricks” us; although they are complex and refined, the processes of our brain are influenced by prejudice, misleading perceptions and illusions, in other words errors that prevent us from seeing and comprehending things as they really are. With a few simple practical tests that uncover optical, acoustic and tactile illusions, the exhibitions aims to offer visitors, adults and children, a chance to experiment with different situation in which the brain “lies”.

The exhibition is proposed by the **Department of Psychology and Neuroscience of Edinburgh University**.

Exposition

Esciential. From Archimedes to Poincaré: dynamics in a multimedia process

Da Archimede a Poincaré: la dinamica in un percorso multimediale

Magazzini del cotone, module 5

An exhibition that examines the wonders of dynamics, with a strongly historical viewpoint, tracing the progress of the science of motion, from Archimedes to Poincaré, including Stevin, Galileo, Huygens and Newton. Visitors can attempt simple mechanical experiments and interact with animated displays and multimedia simulation, and will be introduced to



topics from different stages of the history of dynamics, in a journey that aims to reawaken interest in the physics of motion by direct observation of the phenomena.

The exhibition is proposed by **Institut Non Linéaire of Nice**

Laboratorio

Esencial. The profession of palaeontologist

Il mestiere del paleontologo

Magazzini del cotone, module 5

Becoming a palaeontologist for a day, touching hands-on the living beings of the past and interpreting their history through the remains and traces they have left: this laboratory, which is linked to the exhibition “Restros y rastros – Remains and traces”, transforms participants into real palaeontologists, studying the structures and processes by which fossils are formed, using specific scientific methods of analysis, to examine and classify the “remains” (bones, teeth, leaves) and “traces” (footprints, scratches, excrement) of living beings from the past.

The laboratory is proposed by **Museo de la Ciencia de la Fundación “la Caixa” of Barcelona.**

Laboratorio

Esencial. The secrets of rocks

I segreti delle rocce

Magazzini del cotone, module 1, 2nd floor

This laboratory, designed for secondary school pupils but open to the general public, helps participants to understand the complexity of geological phenomena by direct observation and analysis of an incredible variety of rocks, which are extremely heterogeneous in terms of shape, colour, composition and origin. The rocks are studied using scientific investigative instruments that are usually only accessible to full-time scientists, and participants will learn to recognise the main differences between igneous, metamorphic and sedimentary rocks.

The laboratory is organised by **Techniquest of Cardiff.**

Exposition



Essential. Jurij Georg Vega, artillery and logarithms

Jurij Georg Vega, artiglieria e logaritmi

Magazzini del cotone, module 5

The exhibition presents a precious collection of mechanical models invented for use in ballistics by Jurij Georg Vega (1754 - 1802), the most famous Slovene mathematician who, although coming from an extremely poor family, managed to earn himself a position in high society over the years thanks to his scientific merits (he drew up exceptional logarithmic tables, the most accurate of his day, which were used throughout the Twentieth century).

The exhibition is proposed by **Tehniski Muzej Slovenije of Ljubljana**

Laboratorio

Essential. Microbes

Microbi

Magazzini del cotone, module 1, 2nd floor

This laboratory, which is designed above all for secondary school pupils, transforms visitors into “microbe hunters”: they have to discover the bacteria that have caused an outbreak of food poisoning among the guests at a wedding reception. To perform their investigation successfully, the students obviously have to learn the basic methodologies of microbiology, which are taught by expert animators.

The laboratory is organised by **Techniquest of Cardiff**

Sponsored by: **Higher Institute of Health**

Exposition

Essential. Remains and traces

Resti e tracce

Magazzini del cotone, module 5

This exhibition helps visitors to tackle various concepts of the evolution of matter, living and inert, discovering the hidden secrets of fossils and rocks. They can develop hypotheses regarding events surrounding the death of the dinosaur whose crouching skeleton was found in Mongolia, or the meteorite that fell onto the Namibian desert in prehistoric times.

The exhibition is proposed by **Museo de la Ciencia de la Fundación “la Caixa” of Barcelona.**

Exposition



The Exploration of the Plant Kingdom

L'Esplorazione del Regno Vegetale

Giardino Botanico Clelia Durazzo Grimaldi

October 28 – November 8

Monday to Friday 9 am – 5 pm, Saturday, Sunday and holidays 10 am – 5 pm

During the guided tours of the Clelia Durazzo Grimaldi Botanical Garden in Pegli (Genoa), visitors will be able to observe and understand the biological mechanisms of numerous plants and to admire species that provide food, medication or mere aesthetic pleasure.

Prepared by: A.S. Ter

Exposition

Exploring. A journey through technology, from the earth to space

Esplorando. Un viaggio nella tecnologia dalla terra allo spazio

Magazzini del cotone, module 2, 3th floor

October 28 – November 8

Monday to Friday 9 am – 7 pm, Saturday and holidays 10 am – 8 pm

Through a series of models and multimedia installations, the exhibition progresses from daily life in Genoa out into space; to discover the technologies we use every day to work, to travel and to communicate safely, those used to defend the environment by means of environmental monitoring and the production of clean energy, right up to observation of the earth, space exploration and interplanetary travel.

From the materials we use every day and which are derived from technologies born for space exploration (microchips or Teflon, for example), to technologies used for space exploration and explained by the models and multimedia installations that illustrate the best-known missions, from Smart 1, which revealed many of the moon's mysteries, to Cassini, which reached Saturn this Summer after 7 years, or the Venus Express which will be launched in 2005.

Sponsored by: **Finmeccanica**

Booking is recommended for schools and groups (see "General information" section)

Exposition

Exploring the antarctic ice. Discovering the climate of our planet

Esplorare i ghiacci antartici. Alla scoperta del clima nel nostro pianeta

Spazio Telecom - Piazza delle Feste

October 28 – November 8

Monday to Friday 9 am – 7 pm, Saturday, Sunday and holidays 9 am – 8 pm



Glaciers are an archive of the history of the climate and the atmosphere, because they contain air bubbles, wind, volcanic and cosmic dust; Antarctic glaciers are particularly useful in helping us to understand global climate change and to build reliable forecasting models for the 21st century. Visitors will be able to observe and touch a real ice core, i.e. a cylinder of ice obtained by drilling into a glacier, using a microscope to detect the presence of any gas bubbles, analysis of which will make it possible to measure concentrations of carbon dioxide, oxygen, etc., at the various depths and ages.

There will be a guided tour every day at 11 am and 3.30 pm.
Booking is recommended for schools and groups (see "General information" section)

Exposition

Exploring the solar system

Esplorando il Sistema Solare

Magazzini dell'Abbondanza

October 28 – November 7, 2004

Every day, 9 am - 7 pm

The United Kingdom is one of the main coordinators of 5 important missions launched between 2003 and 2005, and the British Council celebrates these events with this itinerant exhibition. The exhibition focuses on the most important missions and describes some of the challenges facing scientists and engineers when they design space vehicles. Striking photographs accompanied by a readily comprehensible text, guide the visitor through his space adventure. For the latest news on the United Kingdom's space missions, data and programmes, explore:

www.britishcouncil.it

The British Council is the official organisation that maintains international relations in the field of culture and education; it establishes mutual enhancement agreements between the United Kingdom and other countries, and promotes British creativity and the objectives reached.

Booking is obligatory for schools and groups.

Exposition

Faces and places of research and treatment

Volte e luoghi della ricerca e della cura

Ospedale Galliera

October 30 – November 14

Every day, 9 am - 6.30 pm



95 photographs by photographer Claudio Gallone. The exhibition illustrates the research and treatment activities carried out in an important scientific hospital centre.

Free admission

Prepared by: Milan Polyclinic, sponsored by the Ministry of Health

Exposition

Fatal Attraction and Earthquakes

Attrazione Fatale e Terremoti

Ex Manifattura Tabacchi, Sestri Ponente

October 28 – November 8, 2004

Monday to Friday, 9 am - 7 pm, Saturday and holidays 10 am - 8 pm

Two parallel exhibitions which propose two journeys, one *inside* and one *around* our planet.

Entering the Earth, sparking off an earthquake, observing the movements that shake the earth's surface in real time from inside a seismic observation centre; special exhibits, some of which are quite large, allow the visitor to experience for himself not only a fascinating scientific adventure, but above all the emotions aroused by this terrifying natural phenomenon.

The second exhibition illustrates a natural phenomenon that is generally less well-known but extremely interesting: the Earth's magnetic field.

Weak, invisible and constantly changing, the Earth's magnetic field is one of the manifestations of the life of our planet, that tells us about its deepest core and about its extreme propagations into space.

Booking is obligatory for schools and groups (see "General Information" section).

Organized by: **INGV**

Exposition

Flowers

Palazzo Rosso

October 28 – January 6, 2005

Tuesday to Friday, 9 am - 7 pm; Saturday and Sunday, 10 am - 7 pm. Monday closed

New technologies = new perceptions. This seems to be the motto of Katinka Matson, an American artist who has always been a strong supporter of the use of technology to understand our relations with nature and the world, to adapt our eyes to the dizzy progress of reality around us.



Thanks to the flat-bed CCD scanner invented in 1975 by Ray Kurzweil, Katinka Matson's works depict not only petals, stamens and pistils, but also the rhythm and depth that they can express if they are positioned in a certain way, revealing unsuspected identities and a naturalistic approach. The essential difference from a camera lies in the way objects are illuminated and the darkness that softens the background, all elements that make the detail and the colours stand out even more.

Booking is recommended for schools and groups (see "General Information" section).

Evento

The future seen by Telecom Italia

Spazio Telecom Italia – Piazza delle Feste

October 28 – November 8, 2004

Monday to Friday 9 am – 7 pm, Saturday and holidays 10 am – 8 pm

Discovering, interacting, drawing close to the world of technology and science: this is what Progetto Italia proposes, inviting all the visitors to the Festival to Piazza delle Feste, renamed "Spazio Telecom" for the occasion, to explore the installations created by TiLab. The displays include **digital graffiti**, **chromo-pentagram**, **virtual bike** and **Phantom**. The **interactive design** is the creative work of the Interaction Design Institute of Ivrea, which organises workshops for children, and now proposes four projects developed by the students: **my 500**, **not so white wall**, **ninja writing**, and **portable museum**.

The Mtv and La7 television channels demonstrate the potential of the new **digital terrestrial** technology, and La7 will also record two episodes of the programme "**Sfera**" hosted by Andrea Monti. TIM introduces the latest applications in the field of mobile telephones, such as **Edge** technology and **3G** services.

Progetto Italia will take advantage of the total eclipse of the moon on the night of October 27-28, the date the Festival opens, to organise "**White night without moon**".

Sponsored by: **Progetto Italia**

Exposition

The Garden of the Sun

Il giardino del Sole

Osservatorio Astronomico del Righi

October 29 – November 8, 2004



Monday to Saturday 9 am – 2 pm, Sunday and holidays closed

The Righi Astronomical Observatory opens the doors of the Garden of the Sun to the public, where visitors can observe the behaviour and phenomena of our planet. During the Festival, the Garden also hosts a scale reproduction of the planets in the solar system.

Visits are reserved for schools. Booking is obligatory.

Organised by: Osservatorio Astronomico del Righi – circolo Endas, Liceo Scientifico G.D. Cassini, Cassiopea Project.

The Heritage Authority for the Albergo dei Poveri: the story of a restoration project

La Soprintendenza al Patrimonio per l'Albergo dei Poveri: un itinerario nel restauro

via Balbi 10, Palazzo Reale restoration laboratory
from October 28 to November, 10 am - 1 pm

The exhibition is a unique opportunity offered to the public to see restoration work for themselves, through the “live” presentation of the various stages of a conservation project undertaken by restoration workers from the Authority for a number of precious works from the Albergo dei Poveri. The initiative marks the start of an ambitious project whose objective is the gradual recovery of the prestigious Brignole art collections.

Booking is obligatory for schools and groups (see “General Information” section).

Organised by: Office for the Historical, Artistic and Ethno-anthropological Heritage of Liguria

With the backing of: Genova and Genova Sud-Ovest Rotary

Exposition

The infrared eye

L'occhio a infrarossi

Museo Diocesano

October 28 – November 8. 2004

Every day, 10 am - 1 pm

The exhibition comprises a number of demonstrations that focus on the use of infrared reflectography. This diagnostic technique offers the art historian precious information which helps him to understand the genesis of a work of art and the artist's working methods. Catching a glimpse of a “hidden” aspect of the work of art is extremely interesting, even for the general public. The work used in the demonstration is the *San Lazzaro Triptych* painted by Pier Francesco Sacchi in the early 16th century, which has a particularly rich drawing technique.



The exhibition is linked to several lectures which will be held in the Diocesan Museum.
For further information: tel. (30) 010 2541250, museodiocesano@diocesi.genova.it

In collaboration with: INFM, Genoa University

Exposition

Leonardo da Vinci and music

Leonardo da Vinci e la musica

Porto Antico, Magazzini del cotone, module 2, 3rd floor

October 28 – January 6

Monday to Friday 9.30 am – 7 pm, Saturday and holidays 10 am – 8 pm

Few people know that Leonardo da Vinci dedicated numerous studies to music, as his writings, notes and drawings show. This exhibition explores this aspect of the production of the great genius with about fifteen instruments built to his drawings. The Viola organist, the paper Organ, the arm Lyre shaped like a horse's skull, the bagpipes, flutes, bells and rattles on show here reveal that Leonardo concentrated his efforts on the acoustics, rhythm and architecture of sound, using his experiments to improve traditional instruments.

Perfectly functional, studied and built by Akio Obuchi, Joaquín Lois and Simone Vignato among others, the instruments will be used at the concert "Music in the days of Leonardo" (Teatro Duse, Friday October 29, 8.30 pm, see chronological programme).

The public will also be able to admire facsimiles of the Madrid Codices (I and II), which were only discovered in the Spanish capital in the 1960s, and contain a vast sample of the great man's thoughts, from his studies of the movement of waves to those of the flight of birds, his sketches and his drawings of musical instruments. Advanced technologies will also give the visitor an insight into the entire musical and cultural universe of the Renaissance: interactive games, acoustic experiments and audiovisual aids will immerse him in a fascinating technical-Renaissance atmosphere, making the visit to the exhibition particularly fascinating.

Sponsored by: **Fondazione Carige**

Booking is obligatory for schools and groups (see "General Information" section).

Some instruments will not be on show on October 28 and 29, for technical reasons related to the concert "Music in the days of Leonardo" (see October 29, 8.30 pm).

Exposition

The microscopes of physics. From quarks to the Universe: instruments to observe the invisible



I microscopi della fisica. Dai quark all'Universo: gli strumenti per osservare l'invisibile

Oratorio di San Giovanni di Prè
October 28 – November 8
9 am – 7 pm

How do physicists study the smallest constituent parts of everything we know and what do they see? How do they observe the Universe, finding the origin of everything that exists and of ourselves? The exhibition aims to explain what we know about the infinitely small and the infinitely large, using the instruments adopted to investigate these two worlds. A special space is set aside for interdisciplinary applications of nuclear and sub-nuclear physics. The exhibition includes interactive exhibits and simulations that make it particularly suitable for schools

Prepared by: **National Institute of Nuclear Physics**

Exposition

Mindball and Hang Glide

Area Mandraccio, Porto Antico
October 28 – November 8
Monday to Friday 9 am – 7 pm, Saturday and holidays 10 am – 8 pm

Two great attractions that let the public interact with technology in an unusual, entertaining way. Mindball is a sort of cerebral table soccer, comprising a table a small ball and two goals. The ball is moved to one side or the other by the brain activity of the two contestants, which is measured by sensors. Only alpha and theta brain waves (which are developed in the brain when a person is relaxed) will send the ball into the rival goal, so the player who is less obsessed with the idea of victory will win. Hang glide, on the other hand, is an interactive flight simulator, which simulates the experience of real hang gliding. Sitting on the simulator, the visitor has to reach a target displayed on the screen, using his weight and position to pilot the aircraft, and learning to calculate the landing point using the glider's descent speed.

Sponsored by: **Discovery Channel - Focus**

Exposition

**Nanoworlds. Science, technology and aesthetics of the world at 10^{-9} metres
*Nanomondi. Scienza, tecnica ed estetica del mondo a 10^{-9} metri***

Oratorio di San Giovanni di Prè
October 28 – November 8



9 am – 7 pm

Nanotechnologies are the frontier where Physics, Chemistry, Materials Science, Biology and Medicine meet. Its repercussions are already changing the manufacturing world and will condition economic development. The scientific topics presented are grouped into 3 different sections: Looking, Designing, and Building, which let the visitor admire, get to know, experiment with and examine the way these new sciences and technologies work.

Prepared by: APE Research – INFN SpinOff in collaboration with IS – Immaginario Scientifico, TASC INFN, Elettra Sincrotrone, Burlo Garofalo Children's Hospital, Trieste University, Sviluppo Italia Friuli Venezia Giulia

Exposition
Science for our Cultural Heritage
La Scienza per i Beni Culturali

Palazzo Reale, Restoration laboratories
October 28 – November 8, 2004
Monday to Friday, 9 am - 7 pm. Saturday, Sunday and holidays, 10 am - 8 pm

From conservation and restoration techniques to virtual reconstructions of masterpieces like the Scrovegni Chapel, from radio-active dating systems to methods to study colour in works of art: the exhibition lets people discover the new frontiers of technology at the service of culture for themselves, with examples and explanations, and to observe some of the instruments used by scientists and restoration workers, such as lasers to clean stone and fluorescence on paintings, optical microscopes to analyse the structure and state of materials, infrared reflectography and X-ray tomography equipment.

Booking is obligatory for schools and groups (see "General Information" section).

In collaboration with: Office for the Historical, Artistic and Ethno-anthropological Heritage of Liguria, INFN, INFN, CNR, INOA, University of Cagliari

Exposition
Slow and curious: a 'slow' journey through the world of paper, books and Gutenberg
Adagio e curioso: viaggio 'lento' nel mondo della carta, del libro e di Gutenberg



“Slow and curious”, an initiative by the Berio Library for the 2004 Festival of Science proposes a new series of encounters related to the world of paper and books.

A journey of discovery into the techniques, history and characteristics of this fascinating, complex world, with didactic laboratories, exhibitions and lectures in different locations.

For information about Slow and curious programmes: tel. (39) 010 5576074, Imalfatto@comune.genova.it

This year's exhibitions include:

Knowledge and wonders. Traditional and new science in the *library of the Genoese doctor Demetrio Canevari*

Saperi e meraviglie. Tradizione e nuove scienze nella libreria del medico genovese Demetrio Canevari

Biblioteca Berio, Sala Ligneia

October 29, 2004 – January 31, 2005

From October 29 to November 8, Monday to Saturday, 9 am - 6.30 pm, Sunday and holidays, 2.30 - 6.30 pm; from November 9 to January 31, Monday to Saturday, 2 pm - 6.30 pm.

Free admission

The library of the Genoese doctor Demetrio Canevari, who lived in the 16th and 17th centuries, is an opportunity to reconstruct a cross section of the scientific culture of the Renaissance, from the privileged viewpoint of a scientist of the time, observing the evolution from ancient to new science.

For information and reservations: tel. (39) 010 5576050, beriocons@comune.genova.it

Organised by: Conservation and Local Collection Section of the Berio Library

In collaboration with: Opera Pia Sussidio Demetrio Canevari, INFIM, Parma University, ENSSIB of Lyons, LARHRA.

Stories of scientific adventures with alembics and papers from Pammatone to San Martino

Storie di avventure scientifiche tra alambicchi e carte da Pammatone a San Martino

Archivio Storico del Comune di Genova

October 29, 2004 – March 31, 2005

Tuesday, Wednesday, Thursday 9 am -12.30 pm/2 –5 pm, Friday 9 am - 12.30 pm.

Free admission



Documents and ancient medical texts, historical surgical and orthopaedic instruments, tell the story of the origins, history and traditions of hospital care in Genoa.

For information and reservations: tel. (39) 010 5574808

Organised by: Historical Archives of the City of Genoa, in collaboration with the S. Martino Hospital trust and the Faculty of Economics of Genoa University.

An obstinate illusion: measuring time and the timepieces of the Luxoro Museum. A display of ancient scientific treatises, clocks and timepieces.

Un'ostinata illusione: la misurazione del tempo e gli orologi del Museo Luxoro." Antichi trattati scientifici, orologi e strumenti di misurazione del tempo in Exposition.

Museo Luxoro, October 30 – December 4

Tuesday to Friday 9 am - 1 pm, Saturday 10 am - 1 pm.

The restoration and public presentation of a precious 17th century day-night clock, which is part of the Luxoro Museum's important collection, offers an opportunity to examine the history of time-keeping, focusing in particular on the 16th and 17th centuries.

Organised by: Genoa City Council, Culture, Sport and Tourism Department, Museum Sector, with the collaboration of the Department of Physics of Genoa University.

Exposition

Survival Festival: target safety

Survival Festival: obiettivo sicurezza

Porto Antico, Magazzini del Cotone – Module 2 – 3rd floor

October 28 – November 8

Monday to Friday, 9 am - 7 pm, Saturday and holidays 10 am - 8 pm

Who should you telephone in an emergency, and what should you say? How does the fire service intervene when there is a fire? How can one stay calm during a blackout? An entertaining journey through "Survival City" teaches us to survive a thousand dangers to our daily lives, with a constant reversal of roles between victim and rescuer, which transforms the visitor from an ordinary citizen to a member of the emergency services. The program is available in Italian, English and German.

Booking is obligatory for schools and groups (see "General Information" section).

The program is suitable for all students, from nursery school to secondary school, and is available in Braille for the sight-impaired.

Booking is obligatory for schools and groups (see "General Information" section).

Prepared by: Tridentine Museum of Natural Science in collaboration with the Autonomous Provincial Council of Trento and the OASI Group of Cadine (TN)



Evento

The Wonders of Science

Le Meraviglie della Scienza

An exhibition of spectacular exhibits from 25 different countries, a series of interactive laboratories, meetings with experts, and the doors of the most important research centres in Liguria open to the public. From the “human” robot to the mechanical whirlpool, the secrets of the microwave oven and those of an astronomic observatory; a rich series of initiatives to experience and experiment with the wonders of scientific discovery.

The “Wonders of Science” project aims to make students, researchers, lecturers, teachers and businesses interact on concrete initiatives, in order to involve institutional bodies in spreading a scientific culture. Devised and developed by INFM and Genoa University, it comprises an exhibition, laboratories, guided tours of research centres, meetings.

Presented by: **Progetto Italia**

Prepared by: **INFM –University of Genoa**

Exhibition in collaboration with **ASEF**

Exposition

The Wonders of Science. The exhibition

Le Meraviglie della Scienza. La Exposition

Cisterne di Palazzo Ducale

October 28 – November 8

Monday to Friday 9 am – 7 pm, Saturday, Sunday and holidays 10 am – 8 pm

The visitor is at the centre of the world of Wonders; he can communicate with a robot from China that is able to take “intelligent” decision, generate a whirlpool just by turning a handle, or compare ancient and modern musical instruments from distant Brunei....

And he can admire the all-new contents of the second edition of this exhibition, containing exhibits prepared by European and Asian students in the context of an international project.

Booking is obligatory for schools and groups (see “General Information” section).

The exhibition is part of the AESOTOPE Project (Asia-Europe Scientists of Tomorrow Programme), the fruit of collaboration between INFM (National Institute for Materials Physics) and ASEF (Asia-Europe Foundation).

Laboratories



The Wonders of Science. Laboratories
Le Meraviglie della Scienza. I laboratori

Magazzini dell'Abbondanza
October 28 – November 8
Every day, 9 am – 7 pm

Animators and young research workers will involve visitors in entertaining laboratories where they can discover “secrets” like the structure of mayonnaise or how a microwave oven works, cook an egg without heat, understand fractals, or observe the chaotic way the earth’s atmosphere behaves.

Booking is obligatory for schools and groups (see “General Information” section).

The laboratory fact files are available from the site: <http://meraviglie.festivalscienza.it>.

Chronological programme

October 28

Around the world underwater

Massimo Ferrigno, Luigi Magno, Tanya Streeter, Umberto Pelizzari

Acquario, Auditorium
9 pm

Conference in Italian and English, with simultaneous translation into Italian.

October 29

Scientific creativity and obstacles to the development of new ideas

Steven Smale

Introduced by **Tomaso A. Poggio**

Centre Culturel Français Galliera
6 pm

Lecture in English, with consecutive translation into Italian.

Performance

Music in the days of Leonardo

Teatro Duse
8.30 pm



A great world première. The instruments designed by Leonardo da Vinci, studied and rebuilt by Akio Obuchi, Joaquín Lois and Simone Vignato, among others, and on display in the exhibition “Leonardo da Vinci and music”, are the protagonists of this chamber music concert, with pieces by composers who were contemporaries of Leonardo: Agricola, C. Paumann, J. Desprez and many others. The Viola organist, the Organ made of tubes of paper, the silver arm Lyre shaped like a horse’s skull, and numerous other instruments designed by Leonardo, transport the audience into the musical atmosphere of the Renaissance.

Sponsored by: **Fondazione Carige**

What I could never discover about Isaac Newton

James Gleick

Palazzo Ducale, Sala del Maggior Consiglio

9 pm

Lecture in English, with simultaneous translation into Italian.

October 30

The enchantment of science

Felice Frankel

Magazzini del Cotone, module 2, 3rd floor

11 am

Lecture in English, with consecutive translation into Italian.

Science: wisdom or prophecy?

Roland Omnès

Amga, Conference Centre

6 pm

Lecture in French, with consecutive translation into Italian.

The view from inside: explorations in art and the brain

Semir Zeki

Aula polivalente San Salvatore

7 pm

Lecture in English, with consecutive translation into Italian.



Performance

Ambrossia

Pep Bou, Michele Emmer and the soap bubbles

Duse Theatre

8.30 pm

With his performance “Ambrossia”, Pep Bou gives us another glimpse of the visual poetry of the soap bubble, a fragile, unpredictable vehicle which prevents people from seeing their own destinies. The contact between imaginary film and historical characters, and the small, large, fleeting soap bubbles, full of lather and smoke, produces comic situations and hints at man’s fleeting existence.

Galileo’s finger. The ten great ideas of science

Peter Atkins, Claudio Bartocci, Giulio Giorello

Palazzo Ducale, Great Council Chamber

9 pm

Conference in English, with simultaneous translation into Italian.

October 31

The birth of the mind

Gary Marcus

Aula polivalente San Salvatore

5 pm

Lecture in English, with consecutive translation into Italian.

Performance

Ambrossia

Pep Bou, Michele Emmer and the soap bubbles

Duse Theatre

8.30 pm

With his performance “Ambrossia”, Pep Bou gives us another glimpse of the visual poetry of the soap bubble, a fragile, unpredictable vehicle... (see Ambrossia, October 30, 8.30 pm)

The brain that decides



Alain Berthoz and Silvano Tagliagambe, moderated by Armando Massarenti

Aula polivalente San Salvatore

9 pm

Conference in French, with consecutive translation into Italian.

November 2

Fertile contamination

Lorena Preta, Vittorio Gregotti, Alain J. Cohen, Giulio Giorello, Cosimo Schinaia

Archivio Storico di Stato, Complesso di Sant'Ignazio

5 pm

Conference in English/Italian, with simultaneous translation into Italian.

1904 – 2004: From cybernetics to the ecology of Ideas. One hundred years after the birth of Gregory Bateson

Mary Catherine Bateson with Laura Formenti and Sergio Mandi

Magazzini del Cotone, Grecale Room

6 pm

Conference in English/Italian, with simultaneous translation into Italian.

Performance

Sylvatica

Dance and “Motion capture”

Company: **Altroteatro**

Choreography: **Lucia Latour**

Teatro Duse

8.30 pm

Science and dance come face to face, following the complex movements of eight ballerinas and projecting them onto a screen in 3D. The performance adopts the *motion capture* technique, a digital system that reproduces movement, exploiting the means made available by bio-engineering. Like the beetle it takes its name from, which adapts perfectly to any type of habitat, *Sylvatica* is a performance constructed like a new species of living organism, that is elastic and changeable.

November 3



The mysterious history of perfume: the essential power of smell

Annick Le Gu er

Centre Culturel Franais Galliera

7 pm

Lecture in French, with consecutive translation into Italian.

Performance

Sylvatica

Teatro Duse

8.30 pm

Science and dance come face to face, following the complex movements of eight ballerinas and projecting them onto a screen in 3D. The performance adopts the *motion capture* technique ... (see November 2, 8.30 pm)

The physiology of truth

Jean Pierre Changeux

Magazzini del Cotone, Sala Grecale

9 pm

Lecture in French, with consecutive translation into Italian.

November 4

International Conference on Neuroscience & Psychoanalysis: memory, emotions and dreams

Leonardo Ancona, Michael C. Anderson, Jorge Armony, Guido Gainotti, Martha Koukkou, Dietrich Lehmann, Naoyuki Osaka, Evelyne S chaud. Chairpersons: Franco De Masi, Marianne Leuzinger-Bohleber, Mario Mancia, Giuseppe Moccia, Roberto Speciale-Bagliacca

Sala Amga

9 am - 1 pm, 3 - 7 pm

Conference in Italian/English/French, with consecutive translation into Italian and English.

Cosmic illusions

Jayant Vishnu Narlikar

Aula polivalente San Salvatore

7 pm



Lecture in English, with consecutive translation into Italian.

Performance

Magical science

Three illusionists experiment with incredible “numbers”

Ray Graham, Bustric (Sergio Bini), Marco Tempest

Teatro Duse

8.30 pm

Three illusionists show their skills in a performance that is technological, magical, poetic and scientific all at the same time: the Irishman Ray Graham presents the magic of every-day physical phenomena such as gravity, pressure, and fire; Bustric creates spectacular effects with fantastic games and tricks; and Marco Tempest from New York takes his art to the borders of science and magic, with experiments regarding inertia, antigravity and the laser.

November 5

Optic science in the history of art

Charles M. Falco and John T. Spike

Aula polivalente San Salvatore

6 pm

Lecture in English, with simultaneous translation into Italian.

Performance

Magical science

Duse Theatre

8.30 pm

Three illusionists show their skills in a performance that is technological, magical, poetic and ... (see November 4, 8.30 pm)

The numbers of the universe

John D. Barrow, introduced by Marco Cattaneo

Magazzini del cotone, Sala Grecale

9 pm

Lecture in English, with simultaneous translation into Italian

November 6



The strange story of Ignác Semmelweis

Sherwin B. Nuland

Aula polivalente San Salvatore

11 am

Lecture in English, with consecutive translation into Italian.

Life on Earth. The interweaving of biodiversity, ecology and evolution

Luigi Luca Cavalli Sforza, Niles Eldredge, Patrick Bateson, Pietro Corsi, Danilo

Mainardi, Carlo Petrini, Enrico Alleva

Magazzini del cotone, Sala Grecale

3 pm

Conference in Italian/English, with simultaneous translation into Italian and English.

Performance

Concert “Science and understanding”

Wild paths and 5 composers (Carlo Boccadoro, Filippo del Corno, Michael Gordon, David Lang, Michael Nyman) interpret science

Concert conducted by: **Carlo Boccadoro**

Narrator: **Cristina Zavalloni**

Duse Theatre

8:30 pm

The first part of the concert focuses on the relationship between science and contemporary music, with pieces by Michael Gordon, Filippo Del Corno, David Lang and Carlo Boccadoro, inspired by scientific research. *Acts of Beauty* by Michael Nyman, in the second part, is a journey in music around the concept of beauty from ancient Rome to modern times.

Sex and reproduction: bound to divorce?

Carl Djerassi

Magazzini del cotone, Sala Grecale

9 pm

Lecture in English, with simultaneous translation into Italian

November 7



Project for a life: reflections on the plasticity of development

Patrick Bateson

Introduced by **Bruno D'Udine**

Archivio Storico di Stato, Complesso di Sant'Ignazio

10 am

Lecture in English, with simultaneous translation into Italian.

ICSI – Sex in the era of mechanical reproduction

Carl Djerassi

Palazzo Ducale, Sala del Maggior Consiglio

3 pm

Lecture in English, with simultaneous translation into Italian.

Life on Earth: the point of view of bacteria

Lynn Margulis

Archivio Storico di Stato, Complesso di Sant'Ignazio

5 pm

Lecture in English, with simultaneous translation into Italian.

Performance

The song of the stars

Followed by a lecture on astrophysics by Jayant Narlikar

Miméscope Company

Teatro Duse

8.30 pm

The lecture-performance tackles the subject of the life and death of the stars. Amazing, fascinating photographs underline the proposals put forward by Jayant Narlikar, an astrophysicist who questions the immensity of the cosmos, alternating with performances by an actress-acrobat, an actor-mime and two actor-musicians, who tackle the same subjects with the language of dance.

November 8

The music of prime numbers. The story of a mathematical mystery.

Marcus Du Sautoy

Centre Culturel Français Galliera

5 pm



Lecture in French, with consecutive translation into Italian.

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