



Festival della Scienza

## **Exhibitions, Exhibits and Workshops**

### **A Museum On a Children's Scale**

The rooms of the sea, the earth, the air and the fire; the rooms of the inventors' ideas.

from 27 October to 8 November  
Mon to Fri – 9.00 am to 7:00 pm  
Sat and Holidays - 10:00 am to 7:00 pm

An invitation to primary school children to “invent” their ideal museum, thus unchaining their imagination. What do we feel face to face with the marvels of the four elements of nature, or in front of the latest inventions of technology?

How should a scientific museum be set up?

Every child will be free to express his/her own vision and to agree or not with friends' judgements and opinions. The aim of the discussion, introduced and accompanied by music and clips, is to facilitate younger kids' approach to the world of nature and technology, highlighting their wish to communicate their own sensations and spurring their creativity.

Magazzini dell'Abbondanza - Premises 2 A – 1st floor  
Area Porto Antico - Via del Molo

From 6 to 9 years of age.

### **Appearance and Reality**

from 27 October to 8 November  
Mon to Fri – 9.00 am to 7:00 pm  
Sat and Holidays - 10:00 am to 8:00 pm

Everybody knows what optic illusions are: odd figures which trick our perception, showing us misshapen, nonexistent or impossible objects. But even the use itself of perspective plays a trick on our eyes, as it conveys a three-dimensional building or panorama on a flat bi-dimensional surface.

Perspective, mirrors and shadows are the themes of the three sections which make up this exhibit. The aim is to explain how artists and mathematicians in the past learnt how to use geometry in order to create realistic as well as weird illusions.

Oratorio San Giovanni  
Piazza della Commenda



From 6 years of age.

### **Archive Monsters**

Deterioration in books and documents.

from 28 October to 27 January 2006

Tue, Wed and Thu – 9.00 am to 12.30 pm and 14.00 pm to 5.00 pm

Fri – 9.00 am to 12.30 pm

A small but unusual documentary exhibition showing side-by-side perfectly preserved manuscripts and collections as well as specimens suffering the ravages of time. The exhibition provides easy-to-follow information panels covering topics such as parchment making, paper, inks, and the causes of deterioration and some preservation techniques.

Palazzo Ducale, Archivio Storico  
Piazza G. Matteotti 10

From 9 years of age  
Free admission

### **Beyond Sudoku: Mathematical Problems on Grids**

from 27 October to 8 November

Mon to Fri – 9.00 am to 4:00 pm

Sat and Holidays - 10:00 am to 4:00 pm

Last summer, the Sudoku craze swept Europe. Suddenly everybody was doing it. Inspired by Sudoku's success, this workshop presents a collection of other grid-based games. Both on paper and at the PC, grids are determined by simple easy to understand rules. Something for beginners and experts alike. In trying to find the solutions, players practice and develop their logical and mathematical skills.

Magazzini dell'Abbondanza - Premises 1 B – ground floor  
Area Porto Antico - Via del Molo

From 9 years of age.

### **Beyond the Naked Eye: Microscopy of the Infinitely Small**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 8:00 pm



Three interactive stands will give visitors the opportunity to experience for themselves the techniques and applications of extremely high-resolution microscopy. Once again, there will be a probe microscope simulation, plus an opportunity for visitors to test their skill and reflexes measuring the objects of the microscopic world. At the end, participants will be given a certificate reporting their score. A section of the exhibition is dedicated to diffraction, revealed by rays of light going through narrow fissures. With the Macroscope it will be possible to magnify the surface of coin, till it becomes similar to a topographic map.

Commenda di Prè – 2nd floor  
P.zza della Commenda 1

From 11 years of age.

### **Big Scientific Bingo**

from 27 October to 8 November  
at 4.00 pm, 5:00 pm and 6:00 pm

The suspense of a number draw is used in this workshop as an excuse for a playful exploration, between game, show and science. Instead of numbers, objects will be drawn, each of them related to a scientific phenomenon and coupled with it. For instance, if “The Hair-Dryer” is drawn, then this household appliance will be used for simple but extremely effective experiments. “The Boat” is a challenge on the laws of floating, whereas “The Apple” explains how we can use an apple instead of a battery...and so on.

Experiments almost always require materials of everyday use, so that they can be repeated at home too. The end of the game is the prize-giving, where prizes will have, of course, a distinctly scientific feel to them!

Magazzini dell'Abbondanza - Premises 1 B ground floor  
Area Porto Antico - Via del Molo

From 6 years of age.

### **BreedBot: the Robots' Nursery**

from 27 October to 8 November  
Mon to Fri – 9.00 am to 7:00 pm  
Sat and Holidays - 10:00 am to 7:00 pm

BreedBot gives the chance of training a robot population simulated by computers. When he thinks he has got a particularly efficient robot, the “breeder” can transfer its control system (“the Brain”) into the computer installed in a real robot. At this stage, then, the robot is ready to operate in our world.

Visitors will be able to breed their own robot and to challenge other ones.

Magazzini dell'Abbondanza - Premises 1 A - Ground floor



Area Porto Antico - Via del Molo

From 11 years of age.

### **Catching Time**

from 27 October to 8 November

Mon to Fri - 9.00 am to 7.00 pm

Sat and Holidays – 10.00 am to 7.00 pm

How did the ancients measure time? How did they build their different kinds of sundials?

An itinerary in stages clearly shows how the concept of time we have today differs from the one of ancient civilizations.

Workshops at the end of the itinerary will also give visitors the opportunity to build a small sundial to bring home, using recycled materials.

Magazzini dell'Abbondanza - Premises 3 B – 2nd floor

Porto Antico Area - Via del Molo

Starting from 6 years of age

### **Chaos and Harmony**

from 27 October to 27 January 2006

during the Science Festival: Mon to Sat – 9.00 am to 6.00 pm. Sunday closed

Insights into the laws of nature provided by the writings of physicists over the last 500 years .

2005 is the year of Physics and one hundred years after the publication of Einstein's groundbreaking theory, this exhibition focuses on some of the major figures in physics and the books that have contributed to the history of science since the invention of the press.

This exhibition focuses on the scientists and their works that have tried to explain how our world works: from Aristotle to Descartes, from Galileo to Newton, from Volta to Fermi.

Special attention is dedicated to examining how scientific literature has responded to the constantly changing needs of scientific communication.

Biblioteca Berio

Via del Seminario, 16

From 12 years of age.

Free admission



### **Colours, Colours, Colours**

From 2 to 4 November

From 10.00 am to 1.00 pm and from 2.00 pm to 4.00 pm

This workshop offers the opportunity to experience two different situations related to the world of colour. In the Practical Dyeing Test visitors are shown the basics involved dyeing natural textile fibres. Using dyes, visitors will be given the opportunity to colour everyday products, such as coloured tissue paper, drinks or candies. In Studying and Recognizing the Most Used Pigments in the Painting of the Past, the expert hands of a professional picture restorer will remove micro-samples from a picture and carry out an analysis of the fragments.

Museo Nazionale dell'Antartide - Laboratorio didattico, Palazzina Millo, 1° piano, Calata Cattaneo, Porto Antico.

From 6 to 13 years of age.

Booking service: tel. 010/3538713

### **Cosmica**

Planets, Galaxies, Universes.

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 8:00 pm

A voyage into the outer reaches of space and some of the universe's mysteries such as the : Big Bang and Black Holes. A unique opportunity to admire extraordinary telescope, satellite and space probe images obtained, and –last but not least- sophisticated computer simulations. In the course of the exhibition's four sections (Cosmica, All the Earths of Heaven, Voyager and The Colour of the Stars) visitors will journey through space in search of space probes on their mission of discovery and enter a time warp that leads to where it all began.

Commenda di Prè – 2nd floor

P.zza della Commenda 1

From 11 years of age.

### **Dancing with Physics**

From 27 October to 8 November

Monday to Friday 9.00 am – 7:00 pm Saturday and Holydays 10:00 am – 8:00 pm

The Argentine Tango is an elegant dance for two people which is fascinating for those performing it and for those just watching it. Its steps and moves have always evoked strong emotions.



Tango has always been the symbol of sensuality and in recent years has received increasing attention from public and media alike. This is the starting point for this workshop, which has been designed to offer an unusual viewpoint on the Tango: the study of the physics of movements, as well as the techniques of interaction used between the dancers.

Following a guided, interactive tour participants will learn the fundamentals of the Tango, discovering in the meantime how the laws of physics are constantly at work even in the simplest moves of this enchanting dance.

Magazzini dell'Abbondanza – Premises 5 B - 4th floor  
Area Porto Antico - Via del Molo

From 11 years of age.

### **Danger! The New Children's Emergency Helpline 114**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7.00 pm

Sat and Holidays – 10.00 am to 7.00 pm

How do we behave when we are frightened?

How should we cope with other people's calls for help?

This workshop will show teenagers how to cope with emergencies as well as introducing them to the dedicated children's emergency helpline 118. By raising young people's awareness of emergency situations, the workshop suggests some appropriate responses. A series of films showing everyday emergency situations is followed by workgroups in which young people and tutors discuss response options and try to define best behaviour.

Magazzini dell'Abbondanza – Premises 2 A - 1st floor  
Area Porto Antico - Via del Molo

From 10 to 14 years of age.

### **Earthsong**

**Bernhard Edmaier**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 8:00 pm

A photo gallery showing all the effects produced by the world's climate changes and the natural forces moulding our planet.

The pictures taken on a journey to the most uninhabited and secluded areas of the Earth celebrate the beauty of natural phenomena across the most spectacular



sceneries of the planet, from the Arctic ice surfaces to the Pacific Ocean, from sand to ice deserts , from the snow-capped Alps to green forests. Unbelievable landscapes going from Europe to the Bahamas , from Australia to North America, where art and science are fused , in a tale which reveals the multitude of the earth's marvels.

Palazzo Ducale, Loggia degli Abati  
P.zza Matteotti 9

From 9 years of age.

### **Energy in Your Hands**

from 27 October to 8 November  
Mon to Fri – 9.00 am to 7:00 pm  
Sat and Holidays - 10:00 am to 8:00 pm

The origin of nearly all the energy we use derives from the Sun and plant life. That's why the exhibition takes place in a garden full of plants that naturally capture solar energy thanks to (chlorophyllose) photosynthesis. Inside a greenhouse illuminated from outside visitors will experience first hand that temperature does not only depend on the power of the Sun's rays, but also on other factors such as the greenhouse effect too. The physical principles?? of energy will be the subject of spectacular interactive exhibits, along with a series of high precision measuring instruments.

In one attraction by pedalling furiously on a bicycle visitors will bring to boiling point a liquid carried on the frame so converting their efforts into electric and then thermal energy.

Magazzini Cotone - Premises 1- 2nd floor  
Porto Antico

Starting from the age of 12.

### **Experimenta : “a Voyage into the Machines of Science”**

Galata Museo del Mare, Calata de Mari 1  
Mon to Fri - 9.00 am to 7.00 pm  
Sat and Holidays – 10.00 am to 7.00 pm

Are you ready to leave for a voyage into the machines of science, at the discovery of physics' phenomena? You will have fun and find out what the following objects are and what their functioning is: the “Hairraser”, “Tesla's Machine”, and more odd, game-based didactic interactive exhibits.



This voyage is offered by Experimenta, a scientific event organized by the “Region Piedmont”, which, throughout the last twenty years, has been giving to the younger and the older the chance to explore the frontiers of science and technology in the most involving and charming way.

Website: [www.experimenta.to.it](http://www.experimenta.to.it)

from 6 years of age

### **Extra-Sensory You**

from 27 October to 8 November

Tue and Thu – 9.00 am to 7.00 pm

Sat, Sun and Tuesday 1 November – 10.00 am to 7.00 pm

The profession of the inventor requires good skills in recognizing objects, representing them in the mind and transforming them into words. All these skills may be improved through exercise. This workshop is dedicated to the five senses and will drive children and their families to think just as an inventor does, boosting their creativity, the conversion of projects into objects, the communication of ideas. These mind games might at first seem difficult and abstract, but, thanks to the game approach soon become natural and fun.

Magazzini dell'Abbondanza – Premises 4 B – 3rd floor  
Area Porto Antico - Via del Molo

From 4 to 12 years of age.

### **Extreme Science**

from 27 October to 7 November

from 10.00 am to 6:00 pm

For enthusiasts of free climbing and adventure, the “Museo Tridentino di Scienze Naturali” of Trento has created a dedicated space to experience both climbing and exploration in extreme environments. Sport climbing is an enjoyable and original way of getting to know statics and mechanics. The harmonious and fluent movements of an expert climber seem to require minimum effort, but hide, in fact, calculations and reasoning similar to those of a physics or engineering student.

la Città dei bambini  
Area Porto Antico, Magazzini del Cotone – 1st floor





### **Focus Bio-bubble**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7.00 pm

Sat and Holidays - 10:00 am to 8.00 pm

Bio-Bubble, from the Edinburgh Science Festival, makes it possible to enter a human cell. A scientific scale reproduction, 450,000 times bigger than the original, with the capacity of 40 persons, is the ideal setting to understand a cell's life cycle, experiencing a close-up view of its components. Visitors will also have to accomplish an "Unlikely Mission" inside it: an evil genius wants to produce weird chewing-gum which makes hair grow ...on our teeth! To stop this ghastly plan, a secret agent, with the help of the children, has to discover in a race against time before his arch-rival the seven characteristics common to all living beings.

Complesso S. Ignazio

Via Santa Chiara

From 5 to 10 years of age.

### **From Light to Light**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 8:00 pm

The exhibition helps us to describe and understand phenomena related to the presence of light and colours in the environment such as the colour of the air, of the sky, of sunset, of summer thunderstorms, and also the colour of shadows, and rainbows, with all the effects visible in nature depending on different weather conditions and, consequently, on the size of water drops.

In this exhibition, visitors will meet many aspects of the heuristic method used by scientists to discover the light and colours of nature which, unlike the artist, we so often take for granted.

Palazzo Ducale, Munizioniere

P.zza Matteotti 9

From 6 years of age.

### **"Genes" and "Geniuses" in the Laboratory**

A hands-on approach to DNA

from 27 October to 2 November

Mon to Fri – 9.00 am to 7.00 pm

Sat and Holidays - 10:00 am to 7:00 pm



Biotechnologies represent one of the major scientific revolutions of the 20<sup>th</sup> century. The Life Learning Centre of Bologna of the Golinelli Foundation is bringing to the Festival of Science some workshops that will give the public the opportunity to get to know concepts such as DNA, OGM, science of life.

Among the activities proposed, participants will be able to extract a DNA, to put their own DNA into a bottle, to discover whether a suspect is guilty, or even, thanks to genetic clues, to determine whether some food contains OGM substances.

Many more hands-on experiments, using state-of-the-art technologies, will be organized.

Magazzini dell'Abbondanza - Premises 5 A – 4th floor  
Area Porto Antico - Via del Molo

From 11 years of age.

### **Hamilton, the Quaternions and a New Mechanics**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 8:00 pm

2005, the International Year of Physics, is the second centenary of the birth of Sir William Rowan Hamilton (1805-1865), the British mathematician, a crucial figure in the development of modern science. Hamilton updated Newton's and Lagrange's formulation of classic mechanics. In mathematics he developed the topology of graphs and of Hamiltonian circuits. He also introduced the concept of "Quaternions", a generalization of complex numbers which is the basic step in understanding quantum mechanics. This exhibition highlights Hamilton's discoveries, showing them beside his greatest passions: poetry, his friendship with Wordsworth and the desperate love for Catherine.

Oratorio San Giovanni  
Piazza della Commenda

From 16 years of age.

### **H2-Energy Generation**

Hydrogen for tomorrow's life

from 27 October to 8 November

from 9.00 am to 6:00 pm

It's just a matter of time: in a few years our cars will run out of gasoline and diesel fuel and will start using hydrogen. Once a solution is found to the last remaining technological research obstacles, hydrogen will then become the major player in the transport of tomorrow. Compared to oil, it actually offers a better performance, drastically reducing atmospheric pollution.



The teaching workshop “I-Energy” gives everybody the chance to discover hydrogen: what its main characteristics are, where it is located in nature, how we can “extract” it, how it can be kept, how it can be used (for transportation, but not only for that), why it is a crucial element in the fight against the greenhouse effect and global warning.

Biblioteca Berio - sala mostre  
Via del Seminario, 16

From 6 years of age

### **I'm Not Scared, I'm Learning Prevention**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 7:00 pm

This workshop sheds light on one of the most crucial forms of defence from degenerative diseases: prevention.

Preventing a disease means reducing its possible causes. In other words, it means learning to lead healthy lifestyles that can boost the quality of life.

Both prevention and an early diagnosis are fundamental weapons in the fight against the risk of degenerative forms, such as cancer.

A more cautious approach and some basic rules in our diet, hygiene, behaviour and lifestyle can actually change our body's response to genetic mutations, thus stopping the development of cancer at the very beginning.

Magazzini dell'Abbondanza - Premises 4 A – 3rd floor  
Area Porto Antico - Via del Molo

From 10 to 14 years of age.

### **Invention at Play**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 7:00 pm

When children play they are basically asking questions about the world that surrounds them: the child is the researcher and the game is the experiment. In the same way, a scientist has something of a child's curiosity. More than that: unlike other adults, he keeps thinking he doesn't know enough about the world around him. Still more important, he has a great fun at trying to decipher the world's processes.

The pleasure of invention and discovery is the prime mover of this invitation to creativity and to team playing. A spontaneous workshop where you can find out new uses for common objects and discover how many unknown things work. A



unique occasion to train one's mind, to mistrust prejudice and preserve the desire to explore.

Magazzini dell'Abbondanza - Premises 4 B – 3rd floor  
Area Porto Antico - Via del Molo

Realized by the Lemelson Center for the Study of Invention and Innovation -  
National Museum of American History - Smithsonian Institution.

From 4 to 12 years of age.

### **KidSmart: Taylor-Made Technologies for Children**

From 10.00 am to 6.00 pm

A multimedia, interactive point specifically conceived for nursery school children from and lots of interactive learning software programs to give very young children the chance to develop their logical and cognitive abilities, cope with learning tasks at different levels of difficulty, and learn either alone or in pairs while at the same time having fun. All this and a brightly coloured environment for playing and learning, a special keyboard and a two-seater work station, enabling the kids to learn together.

la Città dei bambini  
Area Porto Antico, Magazzini del Cotone - 1st floor

From 3 to 6 years of age.

### **Marc Didou: Unreality of the Real**

From the Science of the Image to Metaphysics: Marc Didou.

from 27 October to 8 November

Tue to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 7:00 pm

In his work, Marc Didou uses different techniques of fragmentation/re-composition and anamorphosis, derived from the European artistic tradition, mixing them with innovative procedures using the state-of-the-art electronic technologies, such as CAT, the Computed Axial Tomography, aiming to create works of art at the boundaries between the real and imaginary world.

Museo di Sant'Agostino  
Piazza Sarzano 35r

From 14 years of age.



### **Mathsfestival**

from 27 October to 8 November  
from 9.00 am to 7:00 pm

Maritime knots and Genoa's landscape represent the starting points for visitors to approach mathematics. They will learn to recognize both the practical and mathematical problems of knots and will be able to analyze the structure of the knots used on board a ship.

By looking at a map of the city of Genoa, we will tackle some of topography's most fascinating issues, such as the problem of the bridges of Königsberg: is it possible to cross all seven bridges of the city only once and still get back to where you started from?

A further problem will be the connection of a given number of points, avoiding the intersection of the lines.

Oratorio San Giovanni  
Piazza della Commenda

From 6 years of age.

### **MOLAB**

Mobile laboratory for scientific research on artistic-historical man-made objects .

from 27 October to 1 November

27, 28, 31 october 9:00 am – 1:00 pm, 29,30 october and 1 november 10:00 am – 1:00 pm 3:00 pm – 7:00 pm

MOLAB is a unique opportunity to experience first-hand the use of state-of-the-art analysis instruments on works of art and man-made objects of historical interest..

Molab is the only mobile laboratory of its kind in Europe and is equipped to carry out a wide number of research activities. Thanks to nuclear magnetic resonance analysis, special microscopy techniques, and to the examination of the radiation reflected by the object, Molab performs detailed non-invasive analyses into the materials and state of preservation of works of art and historical finds.

MOLAB has carried out researches all over Europe on works of art by Leonardo, Perugino, Raphael works of art, and on the state of preservation of Michelangelo's David.

Museo Diocesano  
Via Tommaso Reggio, 20r

From 11 years of age.



### **Monsters underwater**

from 27 October to 8 November

Mon to Fri – 9.30 am to 7.30 pm

Sat and Holidays – 9.30 am to 20.30 pm

The new fabulous 3D film of the Genoa Aquarium will be screened during the Festival of Science and will take spectators on a virtual descent aboard a special submarine to the unexplored abysses of the oceans, reaching depths never attained up to now.

A world which is still less known than the surface of the Moon or Mars: deep-sea plains, mid-oceanic ridges, deep-sea trenches, hydrothermal springs, bioluminescent jellyfishes, viperfishes, sperm whales, giant squids and many more mysterious inhabitants.

Acquario - Auditorium

Area Porto Antico - Ponte Ambrogio Spinola

From 3 years of age.

Not included in the Pass. Entrance with the Aquarium tickets.

3 € reduction showing Your Festival ticket.

### **One day as molecular biologists**

2 November at 2.00 pm; 3 Nov. and 4 Nov. at 9.15 am and 2.00 pm; 5 Nov. at 9.15 am

This workshop gives the opportunity to observe biological tissues at the microscope, to prepare histological compounds, to build a model of DNA. Visitors can also take part in immunocytochemistry experiments to colour the cells, as well as electrophoresis tests to visualize the genomic DNA. A fascinating insight into the job of a scientist.

Ist. Tecnico Firpo-Buonarroti

Via Canevari, 51

From 14 years of age.

### **Passport for Fungi**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 7:00 pm

There are several kinds of fungi; not only those attacking our skin, and not only edible mushrooms that we can find on pizzas.



The aim of this workshop is to highlight the invisible world of microscopic fungi and their role in our everyday life. The peculiar metabolism of yeast, for instance, allows us to eat bread and various kinds of cheese, as well as to taste beers and wines. From a mould, moreover, we got penicillin, a discovery that has revolutionized Man's life. The many sides of this odd natural kingdom –which is often hidden to us, and yet of basic importance to our life- will be discovered thanks to direct observation and the microscope.

Magazzini dell'Abbondanza - Premises 3 B – 2nd floor  
Area Porto Antico - Via del Molo

Booking is obligatory for schools and groups.

### **Pirro Cuniberti. Jules Verne's Fantastic World.**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 8:00 pm

One hundred years after Verne's death, the Festival of Science would like to pay tribute to the great writer. In the often fantastic descriptions contained in his literary works, his imagination gave us a foretaste of what would later be confirmed by modern science. This exhibition offers us a fascinating insight into the writer's vision in a series of around twenty original drawings by Pirro Cuniberti, which add a new dimension to our understanding of Jules Verne's fantastic world.

Palazzo Rosso - Foyer Auditorium dei Musei di Strada Nuova  
Via Garibaldi, 8

### **Post-Human Shroud**

Techno-membrane for a conscious robot from Vincenzo Tagliasco's body.

from 27 October to 7 November

from 9.30 am to 12:30 pm

The bioengineer Vincenzo Tagliasco, well-known for his research into artificial intelligence, underwent a complete mapping in fifty moulds. These "shroudgrams" will be exhibited jointly with two banners, i.e. special surfaces upon which the moulds have been transferred, thanks to a sophisticated technique of experimental typography, thus shaping a sort of "suit" for an anthropomorphic robot. Francesco Pirella, the author of the project, and chief researchers at the ARMUS Laboratory of E-Typography has already produced some "shroudgrams" of personalities as Margherita Hack, Emanuele Luzzati, Alberto Abruzzese, Edoardo Sanguineti and Luciano Berio (both of them previously exhibited in Paris in «Magie du Corps»), Francesco Biamonti and Mario Luzi.



ARMUS Archivio Museo della Stampa  
largo Francesco Cattanei 3 (via G. Maggio)  
Free admission

**Pure Chlorine. A natural talent**

from 27 October to 8 November  
Mon to Fri - 9.00 am to 7.00 pm  
Sat and Holidays – 10.00 am to 7.00 pm

Nowadays, chlorine doesn't have such a good reputation, but people are often unaware of its benefits in many areas such as in medicine, plastics, electronic components, and drinking water.

In order to help understand the good sides of these workshops offer a short enjoyable trip to discover one of our every day life's most useful .

Magazzini dell'Abbondanza - Premises 2 B – 1st floor  
Area Porto Antico - Via del Molo

From 6 years of age.

**Radioactivity, One Side of Nature**

from 27 October to 8 November  
Mon to Fri – 9.00 am to 7:00 pm  
Sat and Holidays - 10:00 am to 8:00 pm

Ancient as the universe itself, radioactivity is present everywhere: inside the stars, in the Earth's core, even in our bodies. Radioactivity is one of Nature's facets.

With this discovery, a new world was open approximately one hundred years ago; a world that scientists have been studying and learning more and more about. This knowledge has implied a series of practical applications in several fields, such as research, technology, agriculture, the arts and everyday life.

Commenda di Prè – 1st floor  
P.zza della Commenda 1

From 11 years of age.

**Rome's Planetarium Goes on Tour.**

From 27 October to 1 November  
Thursday 27 October - 10.00 am, 11.30 am, 5.00 pm, 9.00 pm  
Monday 31 October - 10.00 am, 11.30 am, 5.00 pm, 9.00 pm, 11.30 pm  
Friday 28 October and Saturday 29 October - 10.00 am, 11.30 am, 3.30 pm, 5.00 pm, 9.00 pm, 11.30 pm  
Sunday 30 October and Tuesday 1 November - 10.00 am, 11.30 am, 3.30 pm, 5.00 pm, 9.00 pm





Rome's Planetarium presents its innovative astronomic shows, a mixture of scientific precision and artistic expression. A selection of eight different live shows will be performed inside a six-meter-high dome. Thanks also to digital technologies and effective background music, the shows create a remarkable atmosphere. One of the shows in the programme is dedicated to young visitors, proof that anyone can look up into the universe in an attempt to find out its secrets and appreciate its harmony.

Museo Luzzati  
Area Porto Antico

From 6 years of age.

### **Rudolf Leuckart**

Zoological Tables.

from 27 October to 8 November

Mon to Fri – 9.00 am to 7.00 pm

Sat and Holidays - 10:00 am to 7.00 pm

European universities in the 19<sup>th</sup> century saw the number of their students grow in a remarkable way, thus making it necessary to find new solutions to carry out lessons. In order to make it possible for a bigger audience to see visual teaching aids (pictures, illustrations, tables, etc.), new books were printed, with pictures the size of more than one meter, such as those by Rudolf Leuckart (1822-1898), zoologist and parasitologist, professor at the University of Leipzig.

Considered to be the father of helminthology - the study of parasite worms - Leuckart painted more than one hundred remarkably beautiful illustrations, which were published by Fisher. The illustrations on exhibition come from the collection of the University of Pavia, one of the largest university collections in the world.

Museo di Storia Naturale "G. Doria" – 1st floor  
Via Brigata Liguria, 9

### **School for Journalists**

27 and 28 October; 2,3 and 4 November

At 10.00 and 11.30 am

The magazine Scoprire gives children the opportunity to become real-life journalists! Participants get a close up view of what a journalist does. With the help of professional journalists they will learn basic reporting skills and cover Festival events, writing their own articles. The most interesting articles will be included in the January issue of Scoprire.

See also: workshop "The Scientific Editorial Staff"



La Città dei Bambini  
Porto Antico area, Magazzini del Cotone, 1<sup>st</sup> floor  
From 8 to 14 years of age

**Science: What story Can We Tell ?**

A Workshop of Creative Scientific Writing.

Anna Parisi, Fabio Magnasciutti

7 November

from 10.00 am to 12:00 pm

Dario Fo claims: “It hasn’t been fully understood yet that only in fun, passion and in laughter can we have real cultural growth”. If we want to grow in our scientific culture, then we must have fun, get passionate and laugh.

A small group of researchers tries to tell teenagers why they enjoy working in the field of scientific research so much and how they have such fun. The author Anna Parisi and the illustrator Fabio Magnasciutti in this workshop will reveal to young visitors some of the tricks of the trade. The purpose is to turn them into authors, inviting them to tell the story of scientific discovery in the most fascinating and exciting way possible.

Biblioteca Edmondo De Amicis, Magazzini del Cotone, Porto Antico area

From 13 to 14 years of age.

**Scientific Police At Work**

from 27 October to 8 November

from 9:30 am to 11:00 am, from 12:00 pm to 1:30 pm, from 2:30 pm to 4:00 pm,  
from 5:00 pm to 6:30 pm

A passer-by discovers a murder, the Police Forensic Department Scientific Police arrives, the crime scene is cordoned off, the press arrives too, the investigation starts. At this point the young visitors to the exhibition are divided into groups to carry out their investigations. By using state-of-the-art techniques on ballistics, fingerprints, DNA, drugs, the children will find and examine the exhibits and then write out their police report in order to discover the culprit.

Complesso S. Ignazio - Via Santa Chiara

**Simple and Complex 2005**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat and Holidays - 10:00 am to 8:00 pm

Understanding the parts is very different from understanding the whole: the properties of the whole not only depend on the characteristics of its parts, but



mostly on their mutual relations. The three sections of the exhibition (Geometry, Matter and Motion) and the twenty-six interactive exhibits of “Simple and Complex 2005” present current subjects of extremely topical interest for scientific research, such as the science of complexity and the theory of chaos. New exhibits dedicated to nature’s complexity make it possible, for instance, to produce vortexes of fire or sand, tornados and miniature lightning, as well as to create clouds and smoke rings using ultrasounds.

Palazzo Ducale, Sottoporticato  
P.zza Matteotti 9

**Solar Powered scooter “Ape”**

from 27 October to 8 November

Mon to Fri - 9.00 am to 7.00 pm

Sat and Holidays – 10.00 am to 7.00 pm

Visitors will admire the new version of the Solar Power “Ape”, fitted with photovoltaic panels .A short video will be shown, explaining some phases of the working process, the photovoltaic plants installed at the IPSIA Odero Institute, and finally the road tests.

Magazzini dell'Abbondanza - Premises 1 A – Ground Floor  
Porto Antico Area - Via del Molo

From 3 years of age.

**Technology for Culture**

from 27 October to 8 November

Mon to Fri – 9.00 am to 7:00 pm

Sat, Holidays and Monday 31 October - 10:00 am to 8:00 pm

In the Telecom premises of the Porto Antico Area, visitors will discover state-of-the-art technologies at the service of culture and human knowledge. Thanks to workshops and learning-focused activities, they will understand and learn while having fun at the same time. A voyage into the new frontiers of the reproduction and transmission of visual arts (cinema, TV, photography), of music, writing and knowledge. Last but not least, an exclusive guest star: a robot deejay using old vinyl discs to convey new emotions...

Spazio Telecom Italia

Area Porto Antico



### **The Children of Uranium**

from 12 November to 8 January 2006  
Tues to Sun– 11.00 am to 18.30 pm

From 12 Nov. 2005 to 8 Jan. 2006 the exhibition The Children of Uranium will be open to the public. The live performance by a small group of actors along with the use of sophisticated technologies to produce images, lights and sounds will make it possible for the eight Children of Uranium live inside the Villa's rooms.

From the age of 14 upwards.

Villa Croce  
Via Jacopo Ruffini 3

### **The Sun Garden**

from 27 October to 8 November  
Mon to Fri - 9.00 am to 1.00 pm

The Garden of the Sun is a permanent exhibition located inside the garden facing the Astronomic Observatory of Genoa Righi. There we can find ancient instruments for the observation of the sun, such as sundials, the Hindu circle, Ptolemy's plinth, and the equatorial sundial. This year's exhibition is enriched by the presence of new exhibits, such as an Egyptian water-clock, a special candle night-clock functioning , a weather station, and a small solar-energy rover. Moreover, thanks to a specially installed spectrometer, visitors will have the chance to see the solar light spectrum.

Osservatorio Astronomico del Righi  
Mura alle Chiappe, 44

From 6 to 19 years of age.

### **The Lord of the Rings: the Mysterious Case of the Stolen Rings**

28 - 29 october and 1 november  
from 3 to 6 pm

Saturn's rings have been stolen during a party. Mr.Schioppannelli, a retired astronomer and detective now working in the "Red Giant" pizzeria has been asked to recover the loot.

The detective has brought in his ex-colleagues to help him get the rings back and catch the thieves.



In the first part of the treasure hunt, the astro-detectives will try to find the rings, but, once discovered that they have all been destroyed, they will face a new challenge: get the right ingredients to recreate them.

Every group will have to propose its own recipe with the doses for all the ingredients found. At the end, Schioppaelli will cook the rings according to the different recipes.

Area Mandraccio - Area Porto Antico  
Area Porto Antico

From 8 to 12 years.

### **The room of numbers**

What do pineapples and the gastropod Nautilus have in common? And what have rabbits got to do with them? An interactive itinerary shows visitors the different aspects linked with the worlds of numbers, from the most scientific to the most hidden, from the historical to the esoteric Universe, in a journey that tells us how, hidden behind the most familiar numbers – one, two, three... -, there are fascinating and important aspects. Visitors will also understand the connection between natural and vegetal forms, the amusing tale of Fibonacci and his famous “Series” M born in 1223 as a solution for the famous “rabbit problem”, raised by the Emperor Frederick the Second of Swabia...

Palazzo Reale, Teatro del Falcone, Via Balbi, 10  
Starting from the age of 6

### **The Numbers of Plants**

from 27 October to 8 November

Mon to Fri - 9.00 am to 5.00 pm

Sat and Holidays – 10.00 am to 5.00 pm

Plants don't grow by chance: their shape, from the order of their leaves to the position of the seeds, actually hides some mathematical and geometric laws . Fibonacci's series, for instance, was discovered in the 13<sup>th</sup> century: every number it contains equals the sum of the two numbers before it. The golden rule, on the other hand, was already known by the ancient Greeks, and, because of its particular beauty, it has been exploited in a large number of paintings and buildings throughout the ages.

Visitors will find evidence of the spiral shapes generated by such mathematical rules in specimens kept at the Botanic Garden of Genoa Pegli.

The exhibition will also host workshops.

Giardino Botanico Pegli  
Via della Maona 11



From the age of 6.

### **The youth parliament debates Biotechnologies**

From 3 to 5 November

Workshop from 9 am to 7 pm (3 and 4 november)

debate: 5 november from 9 am to 12:30 pm

120 High School children simulate a Parliamentary debate on urgent, topical subjects. On the agenda are such controversial subjects as “ Authorization for a Genetic Survey of part of Liguria’s Population as an instrument for Preventive Medicine” or “Authorization to grow Genetically Modified Parasite-resistant Basil”. The kids are assigned their “Institutional Role” by the organizers, and are divided into study groups and provided with the material to study the subject in depth. This detailed study will last one day, followed by a half-day’s parliamentary debate. In this final phase groups meet and work together. The meetings are open to the public.

Magazzini dell'Abbondanza 5 A IV piano (workshop)

Teatro della Tosse sala Campana (debate)

Starting from 14 years of age.

### **The Polar Frontiers: Men’s Ability to Adapt to Extreme Environments**

from 27 October to 8 November

Mon to Fri - 9.45 am to 5.30 pm

Sat and Holidays – 10.00 am to 6.00 pm

In this exhibition, The National Museum of Antarctica examines Man's ability to adapt to the extreme conditions present in the Polar regions and the crucial support provided by technology.

The exhibition shows how equipment, transport, clothing, communication and navigation systems, food and even non-essential items have changed over the last one hundred years.

Museo Nazionale dell'Antartide - Laboratorio didattico, Palazzina

Millo, I° piano, Calata Cattaneo, Porto Antico.

Exclude from subscriptio, Ticket: euro 3,30

From the age of 6



### **The Scientific Editorial Staff**

29 - 30 and 31 october, 1-5 and 6 november  
from 10 am to 6 pm

The magazine Scoprire gives you the chance to become journalists of the Festival! On Sundays, there will be a real editorial staff, with the task of creating the contents of a whole newspaper page.

In the morning, aspiring journalists, after registering, will be thrown in at the deep end of newspaper editing: get that page ready!

During the editorial staff meeting, participants will be given precise tasks to carry out (individually or in groups), aimed at providing full daily coverage of the Festival's events.

In the afternoon the editorial staff will have a second meeting to decide the final format; then the newspaper page is printed and put on sale at newsstands around the Festival area.

la Città dei bambini  
Area Porto Antico, Magazzini del Cotone 1° Piano

From 8 to 14 years of age.

### **The Sea Universe**

Richard Ellis  
Mon to fri 9 am to 7 pm  
Sat and holidays 10 am to 8 pm  
27 october - 8 november

A journey of discovery in this exhibition of one hundred splendid pictures taken from "The Encyclopaedia of the Sea", especially published for this event by the publishing house Codice Edizioni and containing more than 200 drawings by Richard Ellis, oceanographer of the New York Museum of Natural History. Anyone interested in marine life, expert or not, will have an opportunity to visit fascinating sea landscapes, explore the ocean floors and their creatures, from birds to plants, from fishes to sea mammals, from invertebrate creatures to molluscs, and weird and wonderful sea creatures that legends are made of.

Galata Museo del Mare  
Calata De Mari, 1 / Via Gramsci

From the age of 9 years.

### **The Secrets of Dinosaurs**

From 27 October to 8 November  
Mon to fri 9 am to 7 pm  
Sat and holidays 10 am to 8 pm



Dinosaurs are the most fascinating creatures in the history of the Earth, and their mysterious disappearance is still the subject of controversy. Giving visitors the chance to experience for themselves the methods used by paleontologists, from excavating on the field to the latest technologies, this exhibition actually reveals the dinosaurs' secrets. Younger visitors will be able to excavate and play while kept company by dinosaur cubs. School students will be offered workshops focusing on the dinosaurs' characteristics. Finally, all visitors will be shown the final research phase, i.e. the cleaning and restoration of the finds: three big skeletons testify the stateliness of these extraordinary animals, which, millions of years ago, inhabited Gondwana, the present-day Patagonia.

Loggia dei Mercanti  
Piazza Banchi

From the age of 5 years.

### **The Tour of the World in 70 Fish Tanks**

2-3-4-7 and 8 November  
from 9.30 am to 4 pm

An educational team game in and around the Genoa Aquarium in the restored Old Port Area, in which teams of schoolchildren have to track down animals and sea environments mentioned in the novels of Jules Verne and contained in the Aquarium's tanks.

From 6 to 11 years.

Acquario  
Area Porto Antico - Ponte Ambrogio Spinola

Not included in the Pass. Entrance with the Aquarium tickets.  
3 € reduction showing Your Festival ticket.

### **TryScience: A New Way to Discover Science**

27 October - 8 November

Thanks to multimedia points, the Festival will give the opportunity to explore [www.tryscience.org](http://www.tryscience.org), a website promoting a new way of thinking and experiencing science, especially designed for children, parents and teachers. The website gives an opportunity to go on a series of fascinating journeys into the world of nature, visiting the website of more than 450 scientific museums all over the world,





interacting with all museums visitors of the TryScience Network, connected worldwide through multimedia kiosks.

TryScience is a collaboration between IBM Corporation, the NYHOS (New York Hall of Science), ASTC (Association of Science – Technology Centers) and more than 450 scientific centres all over the world.

la Città dei bambini  
Area Porto Antico, Magazzini del Cotone 1° Piano

From 7 to 17 years

### **Two Photons are Better than One**

2 and 3 november

8:30 am – 6:00 pm

Visit to the microscopy and nanoscopy laboratories of the Research Centre MicroScoBIO, LAMBS-IFOM.

Multi-photonic microscopy opens up new possibilities in observing of the biological microcosm: it makes it possible to search into the smallest recesses of life, from the thousandth to the millionth part of a millimetre!

MicroScoBIO researchers lead visitors on a fascinating voyage through this “nanoworld”. A theoretical introduction on multi-photonic microscopy, molecules, fluorescent light as well as lasers, is followed by a guided visit to the chemical laboratory, where visitors will be able to see the preparation of “nano-biorobots” and “nano-biofactories”. The exhibition ends with three-dimensional images of cells and isolated proteins and a chat with Institute researchers.

Centro di ricerca MicroScoBIO  
Via Dodecaneso 33

From 14 years of age

### **Water, Air, Earth, Fire**

The four elements: at the origins of life between art and science.

from 27 October to 27 November

Mon to Fri - 9.00 am to 7.00 pm

Sat and Holidays – 10.00 am to 8.00 pm

Closed on Monday 14 Nov., 21 Nov. and 28 Nov.

Water, Air, Earth and Fire are the four elements our planet is composed of; those making life possible.

The itinerary starts from three different points of view: senses, artistic vision and scientific research. Using interactive experiences and art installations the exhibition illustrates how through the various ways the elements meet energy is



generated. Special attention is paid to future developments, possible directions and interactions between the elements in tomorrow's world.

The end of the exhibition is dedicated to the fifth element, the "ether", also known as obscure element, often quoted but still unknown.

Palazzo della Borsa - Sala delle Grida  
Via XX Settembre 44  
Starting from 9 years of age

### **What will the Weather be like Tomorrow?**

Meteorology and its secrets.

27 and 28 October, 2, 3, 4 and 7 November

At 2.00 pm and 3.00 pm

The Meteo-Hydrological Centre of the Regione Liguria, among the most advanced in Italy, opens its doors to the public to unveil the secrets of its work and the instruments necessary to prepare the weather forecast. It will be possible to watch live data coming from the meteorological stations, the latest images from the satellite, the forecast according to meteorological models for the coming days. Visitors will also see some of the instruments necessary for measuring the main weather-linked variables. Armed with this data, it will be possible to prepare the weather forecast for the following day.

Centro Meteo ARPAL  
Viale Brigate Partigiane 2

From 14 years of age.

### **Where has my Protein Gone?**

3 and 4 november

from 9 till 11 a.m.

A visit to the laboratories and the electronic microscopes of the IFOM, Centre for Cellular and Ultra-structural Oncology.

From 14 years of age.

Proteins are "molecular machines" gathered according to instructions provided by DNA. But, if they're not put in the right place within the cell, these machines may fail to work, or even cause serious illness such as cancer. That's why understanding where proteins end up is crucially important.

The IFOM researchers will guide visitors through all the stages of an experiment: from cell cultures, to the "ultramicrotomes" (instruments able to cut cells in extremely thin slices), up to electronic microscopes, which can search into a cell with a resolution of a few millionth parts of a millimetre.

Centro IFOM / DiMeS



Via De Toni 14

### **Wonders of the Solar System**

Astronomic Photo Exhibition in the Feltrinelli Bookshop.

A selection of images from astronomy help us travel through the Solar System and find out that its heavenly bodies are accessible even to ordinary astronomy lovers thanks to powerful research instruments and modern observational techniques.

From 3 years of age.

#### **100 Suns**

from 27 October to 8 November

Mon to Fri - 9.00 am to 5.00 pm

Sat and Holidays – 10.00 am to 6.00 pm

A photo exhibition testifying the tragic effects of nuclear power. All the pictures were taken either at the moment of explosion or seconds later; they show both underwater and atmospheric nuclear experiments carried out by the United States from 1945 and 1962. The photos come from the USA archives, as well as from those of Los Alamos National Laboratory.

Two photos not from these sources were taken in 2003 by the American artist and photographer Michael Light in Bikini, the island which is still uninhabitable today as a result of radioactive contamination caused by nuclear experiments.

Castello d'Albertis, c.so Dogali 18

From 9 years of age.



## **Chronological programme**

In the following pages you will find a selection of the Festival's events that are particularly suitable for an international audience. All the conferences listed are held in English with simultaneous or consecutive translation into Italian.

### **October 27<sup>th</sup>**

#### **A different Einstein**

Robert Laughlin. Introduced by Vittorio Bo

6.00 pm

Palazzo Ducale, S. Maggior Consiglio  
Piazza Matteotti 9

### **October 28<sup>th</sup>**

#### **The long summer**

Brian Fagan. Introduced by Luca Tancredi Barone

6.30 pm

Aula Polivalente San Salvatore  
Piazza Sarzano

#### **The book nobody read**

Owen Gingerich

7.00 pm

AMGA - Centro convegni  
Via SS. Giacomo e Filippo, 7

### **October 29<sup>th</sup>**

#### **BioBanking. Opportunities for scientific research, intellectual property, privacy and police activity**

Carlo Alberto Redi, Leonardo Santi, Juergen Simon. Moderated by Amedeo Santosuosso

5.00 pm

AMGA - Centro convegni  
Via SS. Giacomo e Filippo, 7



### **Bufaplanetes**

(Show without words)

Pep Bou is an excellent mime with arms long enough to reach the far away blue.

He has succeeded with bubbles, flowers of the air, impossible waves in the same water.

This poetry of soap bubbles, equivalent to words, is the result of his wit. Where, on earth, can we register such unusual show?

The star of the show is a big fish, son of the wind, which runs away from theatre routine. Nails and teeth of prose have nothing to do. Bubbles, army of light, float in emptiness, which is the best way to assert a pact, and reminds us that we have been born and we are, also going to die and that we are rings of a root that does not ask for doctors. Because ephemeral means that does not last. And humankind is nothing else but a constellation of ephemeral stars. act, and reminds us that we are have been.

9.00 pm

Teatro Duse, via Bacigalupo 2

Excluded from subscription. Booking service: tel. 010/412.135

### **Chance: gambling, stock markets and love affairs**

Amir Aczel, Giulio Giorello. Moderated by Simona Morini

9.00 pm

Palazzo Ducale, Sala Minor Consiglio

P.zza Matteotti 9

### **October 30<sup>th</sup>**

#### **Energy in the future**

Jefferson W. Tester

3.00 pm

Palazzo Ducale, S. Maggior Consiglio

Piazza Matteotti 9

#### **Risk and damage and two ways of extending healthy lifespan**

Bruno D'Udine, Linda Partridge



4.00 pm

Aula polivalente san salvatore, Piazza Sarzano

**Women in science**

Manuela Arata, Bice Fubini, Sieglinde Gruber, Federica Migliardo, Elisa Molinari, Paola Tiberia Zanna. Moderated by Sylvie Coyaud

6.00 pm

Palazzo Ducale, Sala Minor Consiglio

P.zza Matteotti 9

**Wonder Lives in the sea**

Richard Ellis

6.00 pm

Acquario

Area Porto Antico - Ponte Ambrogio Spinola

**The fabric of the cosmos**

Brian Greene. Introduced by Marco Cattaneo

9.00 pm

Palazzo Ducale, S. Maggior Consiglio

Piazza Matteotti 9

da 16 anni

**Was Adam a monkey?**

Ian Tattersal and other international experts

9.00 pm

AMGA - Centro convegni

Via SS. Giacomo e Filippo, 7

**Bufaplanetes**

9.00 pm

Teatro Duse, via Bacigalupo 2

(See october 29<sup>th</sup>)



## **October 31th**

### **Did you spot the gorilla?**

Richard Wiseman, Lorenzo Montali

9.00 pm

Palazzo Ducale, Sala Minor Consiglio

P.zza Matteotti 9

## **November 1th**

### **Around the world searching for bacteria**

John Brockman, Aldo Fasolo, Craig Venter

10.00 am

Palazzo Ducale, Salone Maggior Consiglio

P.zza Matteotti 9

### **Barricelli's universe: bio-computation after 52 years**

George Dyson

11.00 am

Palazzo Ducale, Sala Minor Consiglio

P.zza Matteotti 9

### **The boundaries of science**

John Brockman, Craig Venter. Moderated by Alun Anderson

3.00 pm

Palazzo Ducale, Salone Maggior Consiglio

P.zza Matteotti 9

### **Physics in alpine sports**

Alexei A. Abrikosov, Andrei Varlamov

7.00 pm

Aula Polivalente San Salvatore, piazza Sarzano

### **The company of strangers**

Paul Seabright

9.00 pm



Palazzo Ducale, Sala Minor Consiglio  
P.zza Matteotti 9

### **November 2th**

#### **Physics in alpine sports**

Alexei A. Abrikosov, Andrei Varlamov

11.00 am

Palazzo Ducale, Sala Minor Consiglio  
P.zza Matteotti 9

#### **Earth. An intimate history**

Richard Fortey

9.00 pm

Palazzo Ducale, Sala Minor Consiglio  
P.zza Matteotti 9

### **November 3th**

#### **Fractal view of risk, ruin, and reward**

Benoit B. Mandelbrot

5.30 pm

Aula Polivalente San Salvatore, Piazza Sarzano

#### **Children of Uranium**

By Peter Greenaway and Saskia Boddeke. Musics by Andrea Liberovici  
(Show in Italian)

A world premiere for the 2005 Genoa Science Festival: strating from the table of elements, the live performance allows the public to meet eight outstanding scientists and politicians as Newton, Smith, Curie, Einstein, Oppenheimer, Krushev. Gorbachov and Bush, the Children of Uranium, whose destines were affected by the application of nuclear power to war.

6.30 pm and 8.30 pm

Viila Croce Contemporary Art Museum, via Jacopo Ruffini 3

#### **Norbert Wiener: dark hero of the information age**

Marcello Cini, Flo Conway, Jim Siegelman

9.00 pm

Aula Polivalente San Salvatore, piazza Sarzano





## **Chemical Wild West**

(Show in English with translation into Italian)

Dr. Andreas Korn-Mueller presents spectacular chemical and physical experiments as humorous and breathtaking Wild West Show combining with comedy, entertainment, pantomime and light-, stage- and pyrotechnical effects. He performs the ring of fire, he mixes „magic drinks“ in the saloon, a cannon shoots balls to the audience, "Lucky Luke“ shows that he shoots faster than his own shadow, a child produces smoking signs for „Winnetou“, and there is a „duel“ between Korn-Mueller and Sheriff including a flying cartridge.

Duration: 90 min

9.30 pm

Palazzo Ducale, Sala Minor Consiglio  
P.zza Matteotti 9

## **November 4<sup>th</sup>**

### **Children of Uranium**

By Peter Greenaway and Saskia Boddeke. Musics by Andrea Liberovici  
(Show in Italian)

see november 3th

6.30 pm and 8.30 pm

Viila Croce Contemporary Art Museum, via Jacopo Ruffini 3

### **High Energy**

(Show in English with translation into Italian)

Dr. Andreas Korn-Müller presents a mysterious and spectacular energy spectacle. Including music and lighting effects Korn-Mueller alias „Magic Andy“ performs different kinds of energy: mechanical energy (ice bursts iron), biological energy (glow-worm effect), electrical energy (plasma welding), physical energy: red rocket and chemical energy („big bang“ explosion and fire works).

Duration: 45 min

9.30 pm

Palazzo Ducale, Sala Minor Consiglio  
P.zza Matteotti 9



## **November 5<sup>th</sup>**

### **Did Adam meet Eve?**

Enrico Alleva, Steve Jones. Moderated by Telmo Pievani

11.00 am

Palazzo Ducale, Sala Minor Consiglio  
P.zza Matteotti 9

### **Bio-cultural diversity**

Luisa Maffi, Daniel Nettle, David Rapport. Moderated by Telmo Pievani

3.00 pm

Palazzo Ducale, S. Maggior Consiglio  
Piazza Matteotti 9

### **A matter of degrees**

Gino Segre

3.00 pm

AMGA - Centro convegni  
Via SS. Giacomo e Filippo, 7

### **Climate changes begin at home**

Grazia Francescato, Simone Grosso, Ann MacGarry

5.30 pm

Banano Tsunami  
Ponte Embriaco Guglielmo  
Free admittance

### **The road to reality**

Armando Massarenti, Roger Penrose

6.00 pm

Palazzo Ducale, S. Maggior Consiglio  
Piazza Matteotti 9



### **Children of Uranium**

By Peter Greenaway and Saskia Boddeke. Musics by Andrea Liberovici  
(Show in Italian)

see november 3th

6.30 pm and 8.30 pm

Viila Croce Contemporary Art Museum, via Jacopo Ruffini 3

### **Food, cultures, places and genes change our diet**

Efrain Estrella, Saul Molina, Laurie Monti, Gary Nabhan

7.00 pm

Palazzo Ducale, Sala Minor Consiglio

P.zza Matteotti 9

### **Einstein's legacy for 21st century science, culture and politics**

Martin Rees. Introduced by Vittorio Bo

9.00 pm

Palazzo Ducale, S. Maggior Consiglio

Piazza Matteotti 9

### **November 6<sup>th</sup>**

#### **The tower of Babel**

Merritt Ruhlen

6.00 pm

Palazzo Ducale, S. Maggior Consiglio

Piazza Matteotti 9

#### **Albert Einstein: inventor and rebel**

John Stachel

9.00 pm

Aula Polivalente San Salvatore

Piazza Sarzano

### **November 7<sup>th</sup>**



**NO public awareness? no money**

**No dialogo con il pubblico? No finanziamenti!**

Manuela Arata, David Boak, Massimiano Bucchi, Etienne Magnien, Franco Neresini, Bronwyn Terrill

3.00 pm

Palazzo Ducale, S. Maggior Consiglio  
Piazza Matteotti 9

**Sport as a driving force for people and technology**

Jan-Anders Manson, Pascal Vuillomenet

5.00 pm

Aula Polivalente San Salvatore  
Piazza Sarzano