

# The Future of Science

## EVOLUTION



Venezia, 20-23 Settembre 2006



11 studenti del Liceo "Torricelli", insieme a  
4 ex studenti e al prof. Pezzi, hanno  
partecipato a

# THE FUTURE OF SCIENCE

una conferenza di portata mondiale  
tenutasi a Venezia lo scorso settembre

organizzata dalle Fondazioni  
Umberto Veronesi, Giorgio Cini, Silvio Tronchetti Provera



Il gruppo alla Fondazione Cini, sede della conferenza

- Gli studenti del "Torricelli" sono stati gli unici in Italia ad aver partecipato alla conferenza tutti e tre i giorni
- Tre giorni tra i più importanti scienziati, provenienti dalle Università più prestigiose del mondo: Harvard, Princeton, Santa Barbara, Stanford, Oxford, La Sapienza, .....

## **MARGHERITA HACK**

Professore di Astronomia e  
Astrofisica, Università di  
Trieste



## **LUC MONTAGNIER**

Presidente della Fondazione  
Mondiale per la Ricerca e  
Prevenzione dell' Aids







## **STEVEN PINKER**

Professore al Dipartimento di  
Psicologia, Harvard University, USA

## **MARC HAUSER**

Professore di Psicologia, Harvard  
University



## **DANIEL DENNETT**

Professore Universitario,  
Tufts University, USA



## **MICHAEL GAZZANIGA**

Direttore del Sage Center per lo Studio della Mente, University of California, Santa Barbara

## **ANTONIO DAMASIO**

Professore di Neuroscienza e Direttore del centro per lo studio della mente, University of Southern California



## **PETER ATKINS**

Professore di Chimica, University of Oxford, UK

- Tre giorni nello scenario incantevole della Fondazione Cini, all'Isola di S.Giorgio a Venezia







# Dalla serata inaugurale a Palazzo Ducale...



**... al concerto in  
onore dei  
partecipanti  
presso la  
Scuola Grande  
di San Rocco**



# Tre giorni dedicati a:

- EVOLUTION OF MATTER

L'universo dal Big Bang al futuro

- EVOLUTION OF LIFE

Il Darwinismo alla luce della moderna genetica

- EVOLUTION OF MIND

Una storia naturale della cultura



*Lisa Randall*  
**The Evolution of the Universe**

*Paolo de Bernardis*  
**Formation of first cosmological structures**

*Günther Hasinger*  
**X-ray view of the formation of the first objects in the Universe**

*Margherita Hack*  
**From megastars to galaxies, from galaxies to stars**

*Panel discussion*

# EVOLUTION OF MATTER

## L'universo dal Big Bang al futuro

*Chair: Franco Pacini*

*Giovanni Bignami*  
**Exploring our evolving Universe from Space**

*Lodewijk Woltjer*  
**Exploration of the Universe from Earth**

*Luigi Piro*  
**The brightest explosions in the Universe**

*Willy Benz*  
**Extra-solar planets and the search for life**

*Panel discussion*

**ROUND TABLE: Evolution and Society: how evolution is perceived by society  
and by educators**

*(in collaboration with Observa-Science in Society)*

*Chair: Telmo Pievani*

*Participants: Gaspare Barbiellini Amidei, Massimiano Bucchi, Gilberto Corbellini,  
Marco Ferraguti, Giovanni Puglisi*

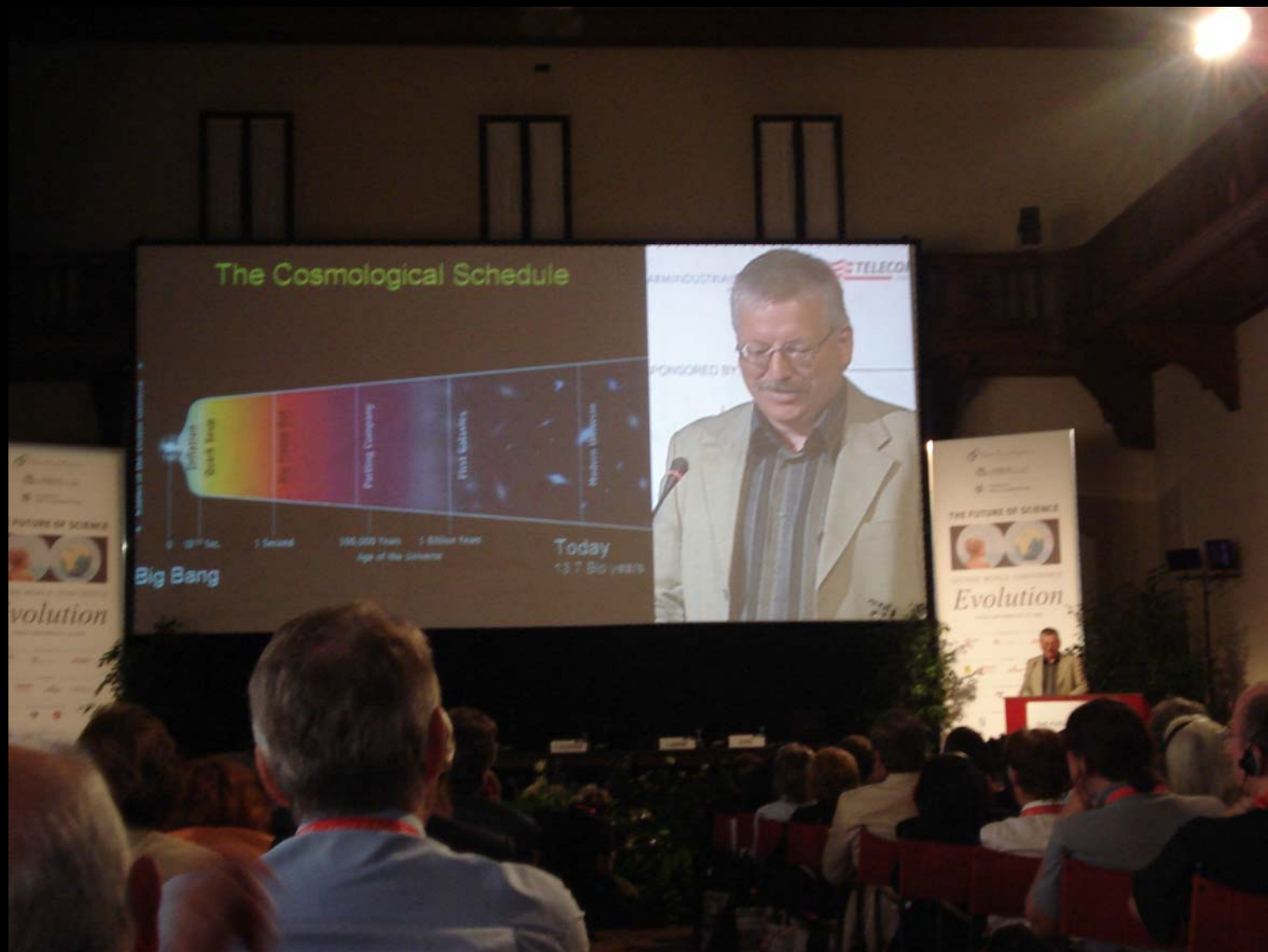




### Cosmology as Science

- Cosmology is now an observational science with theories supported by evidence
- As with evolutionary biology, experiments only to test ingredients of theories
- Only one universe and we want to find the best explanation of its properties
- But detailed tests of basic underlying assumptions are possible







Where are you?

...as a great success a  
...explains  $< 4\%$  of our

..., dark matter





# EVOLUTION OF LIFE

## II Darwinismo alla luce della moderna genetica

*Chair: Peter Atkins*

*Edoardo Boncinelli*  
**Biological evolution today**

*Denis Duboule*  
**Genomes and Evolution**

*Ian Tattersall*  
**Patterns in human evolution and the human biological future**

*Tecumseh Fitch*  
**The Brotherhood of Species and the Future of Biology**

*Luigi Luca Cavalli Sforza*  
**Interplay of genetics and culture**

*Panel discussion*

*ROUND TABLE: Evolution in Science and Culture: how evolution influences all currents of thought*

*Chair: Edoardo Boncinelli*

*Participants: Daniel Dennett, Irenäus Eibl-Eibesfeldt, Tecumseh Fitch, Marc Hauser, Steven Pinker, Ian Tattersall*

*AIRC Conversation: Evolution and Cancer*

*Participants: Edoardo Boncinelli, Giulio Girello*



Friday, September 22, 2006

*...Evolution of Life*

*Darwinism in the light of modern genetics*

Round Table:

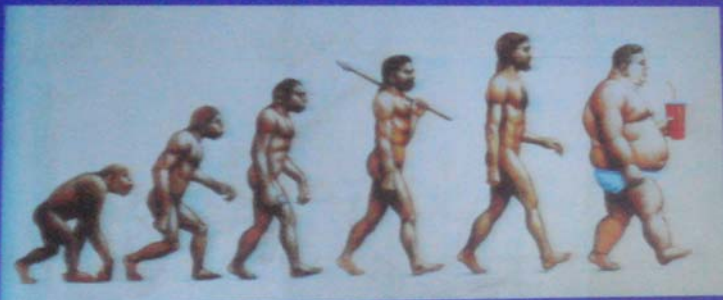
*Evolution in Science and  
Culture: how evolution  
influences all currents of  
thought*

Participants:

Daniel Dennett, Denis Duboule, Irenäus Eibl-Eibesfeldt,  
John Fitch, Marc Hauser, Steven Pinker, Ian Tattersall



# Patterns in Human Evolution and The Human Biological Future

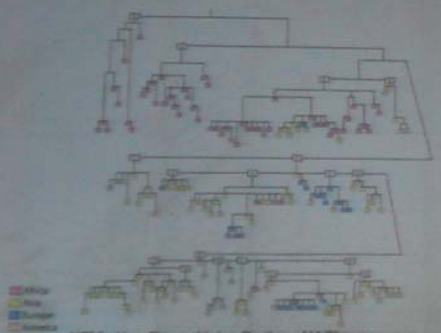
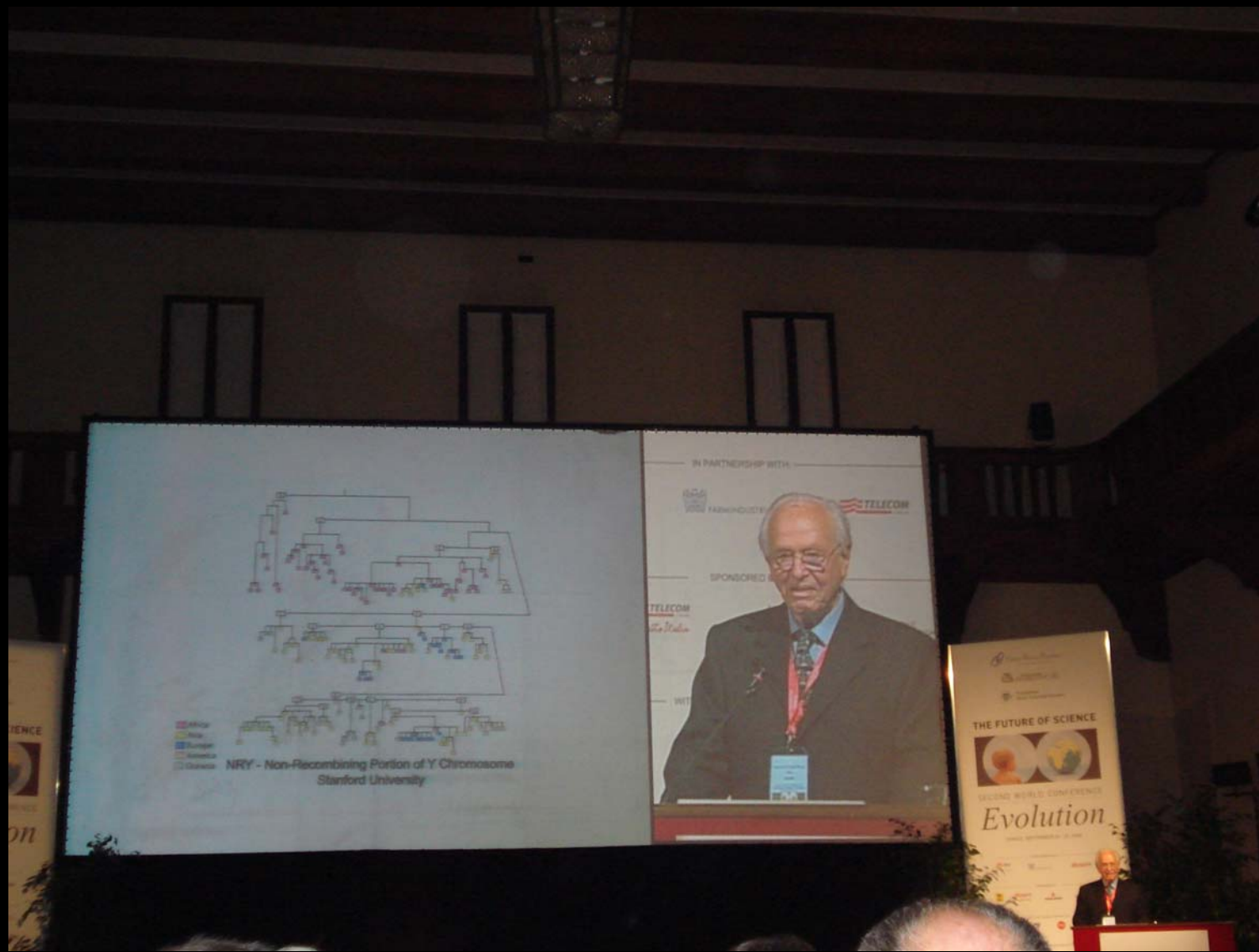


**Ian Tattersall**  
American Museum of Natural History

ENICE, SEPTEMBER 20 - 23, 2008









Friday, September 22, 2006

...*Evolution of Life*

*Conferences in the light of modern genetics*

*Evolution*

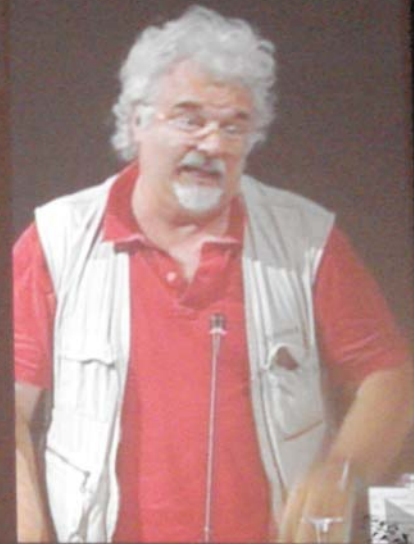
## *Sulla rotta di Darwin*

Patrizio Roversi

Conduttore televisivo

Telmo Pievani

Professor of Philosophy of Science, University of Milan II - Bicocca, Italy







*Chair: Giulio Giorello*

*Steven Pinker*

**The Cognitive Niche**

*Marc Hauser*

**Evolution of a Universal Moral Grammar**

*Michael Gazzaniga*

**Are Human Brains Unique?**

*Antonio Damasio*

**The Emotions in Evolution: a Neurobiological Perspective**

*Irenäus Eibl-Eibesfeldt*

**Final remarks**

*Panel discussion*

# EVOLUTION OF MIND

## Una storia naturale della cultura

*Chair: Marcelo Sánchez Sorondo*

*Tomaso Poggio*

**Finally: coevolution of neuroscience and AI?**

*Maurizio Martelli*

**A Computer Science Perspective**

*Philip Pettit*

**The Evolution of Norms**

*Daniel Dennett*

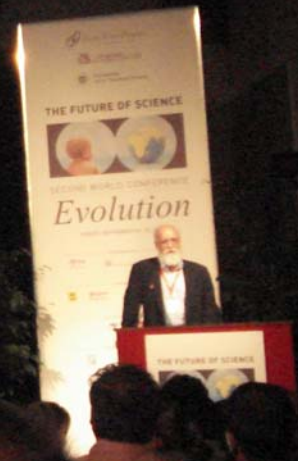
**The Domestication of the Wild Memes of Religion**

*Panel discussion*

# Domesticating the Wild Memes of Religion

2<sup>nd</sup> World Conference  
On the Future of Science  
Venice, September 2006

VENICE, SEPTEMBER 20 - 23, 2006



## Two Evolutionists



VENICE, SEPTEMBER 2





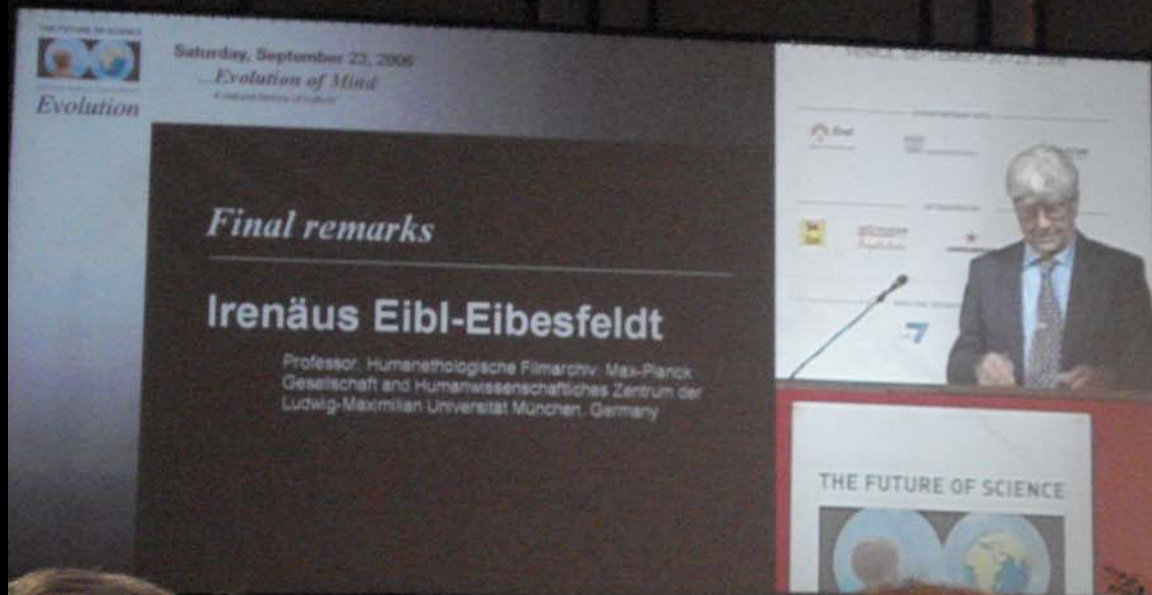
THE FUTURE OF SCIENCE  
GLOBAL WORLD'S CONFERENCE  
*Evolution*  
Saturday, September 23, 2006  
*Evolution of Mind*  
A cultural history of evolution

*Final remarks*

**Irenäus Eibl-Eibesfeldt**

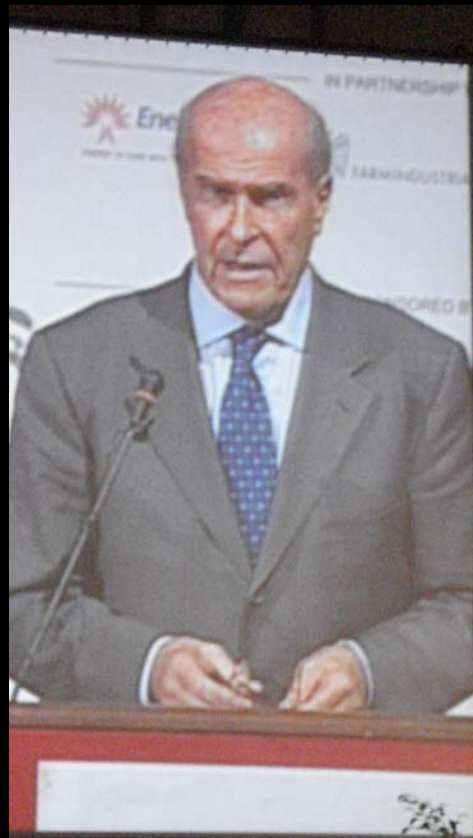
Professor, Humanethologische Filmarchiv, Max-Planck  
Gesellschaft und Humanwissenschaftliches Zentrum der  
Ludwig-Maximilians-Universität München, Germany

THE FUTURE OF SCIENCE



THE FUTURE OF SCIENCE  
GLOBAL WORLD'S CONFERENCE  
*Evolution*  
Saturday, September 23, 2006







# I NOSTRI INCONTRI RAVVICINATI



**UMBERTO VERONESI**, Presidente della Conferenza

# EDOARDO BONCINELLI



Professore di  
Genetica e Biologia,  
Università di Milano







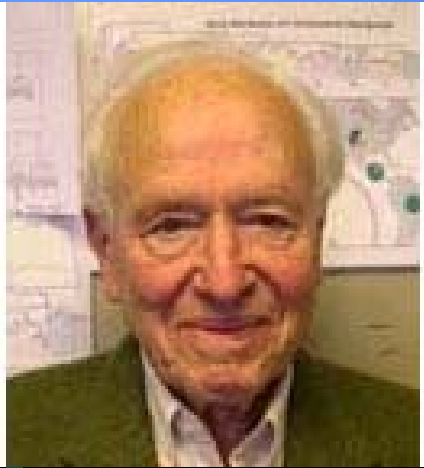
## GÜNTHER GUSTAV HASINGER

Astrofisico  
Direttore del Max Planck  
Institute, Garching, Germania

## LISA RANDALL

Professore di Fisica, Harvard  
University





# LUIGI LUCA CAVALLI SFORZA

Professore di  
Genetica  
Umana,  
Stanford  
University,  
California,  
USA





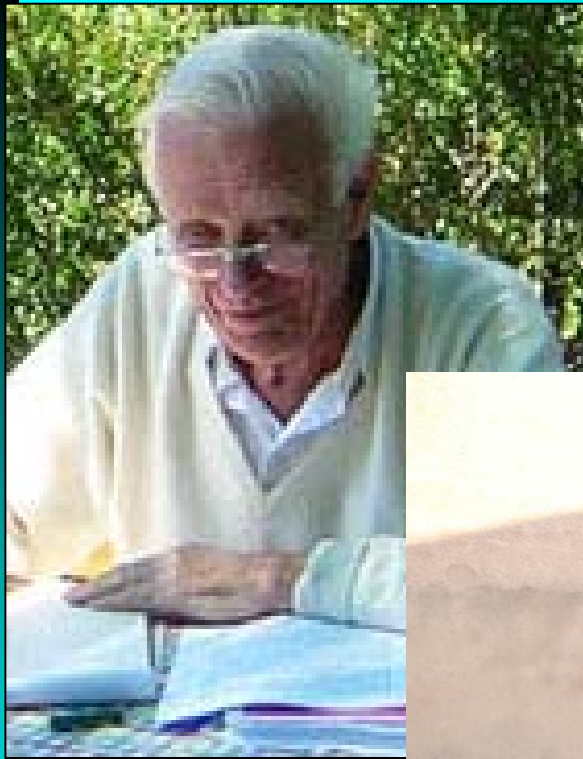
# GIULIO GIORELLO



Professore di Filosofia  
della Scienza, Università  
degli Studi, Milano







# LODEWIJK WOLTJER

Professore di Astronomia e astrofisica  
Francia





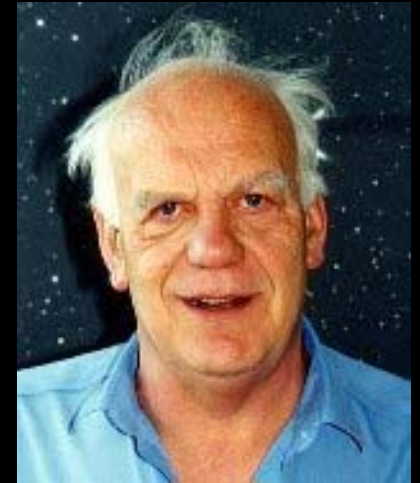
# **IRENÄUS EIBL-EIBESFELDT**

**Università di Monaco, Germania**





# FRANCO PACINI

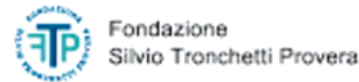


Professore di  
Astronomia e  
Astrofisica,  
Università di  
Firenze



Prossima  
conferenza  
Settembre 2007  
**L'energia**

VENICE 2007



THE FUTURE OF SCIENCE



THIRD WORLD CONFERENCE

*Energy*

VENICE, SEPTEMBER 19 - 22, 2007