



EUROPEAN ACADEMY OF SCIENCES

In support of Excellence in Science and Technology



Palais des Académies de Bruxelles **November 7th, 2008**

The Presidium and the Executive Committee

have the pleasure to invite you to

the **General Assembly** of the
European Academy of Sciences

and the **Ceremony of Awards** of the
Blaise Pascal Medals 2008.

with the support of the Federal Minister of Small and Medium-sized Enterprises, Self-employment, Agriculture and Scientific Research



GENERAL ASSEMBLY OF THE EUROPEAN ACADEMY OF SCIENCES



Date: November 7th, 2008

Venue : Brussels, Palais des Académies, Rue Ducale, 1

Morning Session

- **9 to 9 : 15 am** : **welcome address by Professor Frans Carl de Schryver (member of the Presidium of EAS, member of the Koninklijke Vlaamse Academie van België)**
- **9 : 15 to 10 am** : **Professor Hervé This (INRA/AgroParisTech, Scientific Director of the Fondation Science & Culture Alimentaire): *Questions of scientific methods: the case of molecular gastronomy (recent results; conference with experimentations)***
- **10 to 10 : 30 am** : **Professor Saverio Cinti : *Physiologic reversible transdifferentiation : new perspectives in the field of cellbiology***
- **10 : 30 to 10 : 45 am** : **coffee break**
- **10 : 45 to 11 : 15 am** : **Professor Jin Akiyama : *Mathematics as I like it***
- **11 : 15 to 11 : 45 am** : **Professor Charles Joachain : *Super-intense laser matter interactions***
- **11 : 45 to 12 : 15 pm** : **discussion : *Projects and cooperations***
- **12 : 15 to 13 : 30 pm** : **Lunch**

Académie Européenne des Sciences – European Academy of Sciences

A.I.S.B.L - BCE 0865.074.308

Boulevard d'Avroy 280, 4000 Liege, Belgium - Tel: +32 (0)4 253.67.18 Fax: +32 (0)4 253.28.70

email: info@eurasc.org - <http://www.eurasc.org>



Afternoon Session

- 1 : 45 to 2 pm : welcome address by the President of EAS
- 2 to 2 : 30 pm : lecture of Prof. B. Barbara, BL.Pascal Medal in Physics
- 2 : 30 to 3 pm : lecture of Prof. S. Cinti, BL.Pascal Medal in Life Sciences
- 3 to 3 : 30 pm : lecture of Prof. W.Jaeger, BL.Pascal Medal in Mathematics
- 3 : 30 to 4 pm : coffee break
- 4 to 4 : 30 pm : lecture of Prof. T. Langdon, BL.Pascal Medal in Material Sciences
- 4 : 30 to 5 pm : lecture of Prof. M. Y. Vardi, BL.Pascal Medal in Computer Science
- 5 to 5 : 30 pm : lecture of Prof. G. Van Den Abbeele, BL.Pascal Medal in Social Sciences
- 5 : 30 to 6 pm : conclusions by Prof. J. M. André (EAS member and President of the Académie Royale de Belgique)

Break

- 6 : 15 to 7 : 15 pm : speech of the Federal Minister of Small and Medium-sized Enterprises, Self-employment, Agriculture and Scientific Research ,Mrs Sabine Laruelle and Ceremony of awards.
- 7 : 15 to 9 : 30 pm : Reception

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**Galerie des
marbres
(Palais des
Académies de
Bruxelles)**



Morning Session

QUESTIONS OF SCIENTIFIC METHODS : THE CASE OF MOLECULAR GASTRONOMY

Hervé This

INRA/AgroParisTech,
Scientific Director of the Fondation Science & Culture Alimentaire

Abstract

Until the 80's, culinary transformations (where a lot of interesting phenomena can be observed, from soufflé swelling to meat browning...) were not scientifically studied. The science of food ingredients or food technology were separated by a gap, that was filled by « Molecular Gastronomy », a science created in March 1988 by Nicholas Kurti (Oxford) and Hervé This (Paris). The scientific results obtained since are of two kinds : ordinary or conceptual, and the applications are educational or technological, as for any science. During this lecture, some recent results will be discussed, but the focus will be on methods, and also on open questions...

PHYSIOLOGIC REVERSIBLE TRANSDIFFERENTIATION: NEW PERSPECTIVES IN THE FIELD OF CELL BIOLOGY

Saverio Cinti

Human anatomy and cell biology, School of Medicine
University of Ancona

Abstract

Adipocytes seem to have peculiar properties that allow them to transform reversibly their phenotype. In front of environmental or physiologic changes such as cold exposure or pregnancy and lactation, they can activate molecular pathways able to turn from the white phenotype into a brown phenotype (thermogenetic phenotype) or into milk-producing glands. Our data seems to suggest new windows on the cell biology frontiers of adipocytes.



**Salle du trône
(Palais des
Académies de
Bruxelles)**



MATHEMATICS AS I LIKE IT

Jin Akiyama

University of Tokai, Tokyo, Japan

Abstract :

The talk will consist of a demonstration of mathematical concepts using interactive models. We begin by producing triangle holes and square holes with a drill, then we focus on polyhedral structures: creating Escher-like tessellations of the plane from the surface of a regular tetrahedron, dissecting polyhedra so that they can be turned inside-out to produce other polyhedra, determining the atomic structure for the families of space-filling parallelohedra.

SUPER-INTENSE LASER-MATTER INTERACTIONS

Charles Joachain

Physique Théorique, Université Libre de Bruxelles, Belgium

Abstract :

In recent years, the development of super-intense lasers has led to the discovery of new phenomena in laser-matter interactions. In this talk, a survey will be given of fundamental processes and applications in super-intense laser-matter physics, ranging from multiphoton processes and ultra-fast phenomena on the attosecond scale in atomic systems to controlled thermonuclear fusion using petawatt laser pulses.



EAS BLAISE PASCAL MEDALS 2008



Afternoon session

Professor **Bernard Barbara, France, Blaise Pascal Medal in Physics**

In recognition of his outstanding personal contribution to different subjects of magnetism, with, in particular, the first study on the competition between magnetic order and Kondo effect, Prof. Barbara recently introduced micro-SQUIDS sensors in nanomagnetism. Allowing single dots measurements, this new approach stir up this field. He obtained the unambiguous evidence of the phenomenon of quantum tunnelling in magnetism, and later extended this field to rare-earth ions showing that quantum mesoscopic physics can reach the atomic scale.

Professor **Saverio Cinti, Italy, Blaise Pascal Medal in Biology and Life Sciences**

In recognition of his outstanding work on adipose tissues in relationship with the clinical problems of obesity and diabetes. In this field he created new concepts related to the anatomy, physiology and pathology of adipose tissues, led new light in aetiology of macrophage infiltration and consequently to the aetiology of T2 diabetes. In the field of cell biology the discovery of the physiologic reversible process of transdifferentiation in vivo as a direct transformation of the cell phenotype into another phenotype. His work gave new light in aetiology of macrophage infiltration and consequently to the aetiology of T2 diabetes.. Also Prof. CINTI produced many contributions to the diagnostic use of electron microscopy, and to the knowledge of normal and pathologic anatomy of humans and other mammals.

Professor **Willi Jaeger, Germany, Blaise Pascal Medal in Mathematics**

In recognition of his outstanding contribution in the field of mathematical modelling, analysis, and simulation of complex and mainly nonlinear systems. Prof. JAEGER is involved in a wide field of applications which include physical, chemical, biological, and also medical and industrial applications.

Professor **Terence G.Langdon, UK - USA, Blaise Pascal Medal in Material Science**

In recognition of his outstanding achievements and pioneering research in the processing of ultrafine-grained metals by severe plastic deformation and for fundamental investigations into the properties of materials processed by equal-channel angular pressing and, more recently, high-pressure torsion. Currently, Prof. Langdon has published more than 500 scientific papers in peer-reviewed journals with more than 300 different co-authors. His publications have received over 14,000 citations.

Professor **Moshe Y.Vardi, USA, Blaise Pascal Medal in Computer Science**

In recognition of his outstanding contributions in several areas of computer science connected by their use of logic as an underlying methodology. His work has had fundamental and lasting impact on automatic verification, logic of knowledge, database theory, and finite-model theory.

Professor **Georges Van Den Abbeele, USA - Belgium, Blaise Pascal Medal in Social Science**

In recognition of his outstanding contributions to rethinking of human and social studies in a contemporary context including philosophy, anthropology and the impact of cognitive studies on the "digital divide". Also Dr VAN DEN ABBEELE produced deep work on francophone studies and the history of the European idea.

The Awards ceremony will be honoured by the support of Mrs. Laruelle, Federal Minister of Small and Medium-sized Enterprises, Self employment; Agriculture and Scientific Research



Localisation :



Registration form

please fax it to the Academy, FAX: +32 (0)4 253.28.70

November 7th, 2008: EAS General Assembly, Brussels

Title: Prof. Dr. Mr. Mrs.

Name

Address

.....

Tel. Fax

E-mail:

Registration fee

EAS Members: 40 €

Universities: 50 € University

Companies: 60 € Company

Accompanying person: 50 € Name

**I attach proof of my bank transfer at no charges for the payee at the account
IBAN: BE91 3400 6586 6876 BIC: BBRUBEBB
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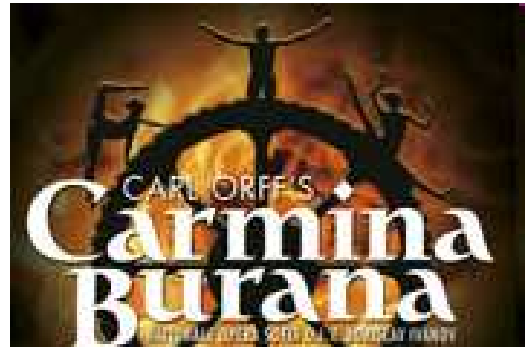
For organisation and security reasons, participants are kindly requested to bear the registration form with them

Entertainment in Bruxelles Music and exhibitions

Opera :

Carmina Burana (Carl Orff)

Organisation : Music Hall Promotions
saturday 08 and sunday 09 november 2008 @ 20:00
(reservations www.forestnational.be)
Place: Forest National
Address: Avenue du Globe 36 1190, Forest (Bruxelles)
Price : from 28 to 68 €



Exhibitions

Belgique 58

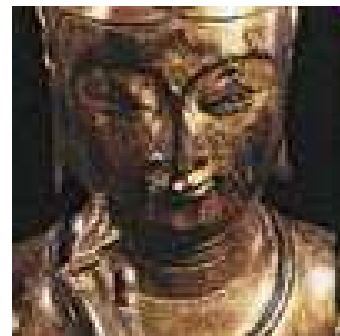
Place: Architecture Museum - La Loge
Address: 86 rue de l'Ermitage, 1050, Ixelles (Bruxelles)
Price: from 0 to 4€



In 1958, the Universal Exhibition in Brussels, which attracts forty-two million visitors, offers through its pavilions a synthesis of aesthetic concerns at the time that breaks with standards classics of the thirties.

The Buddha's smile

Place : Palais Des Beaux Arts - Bozar
Adress : Rue Ravenstein 23, 1000 Bruxelles
Prices : € 9,00: adults
€ 7,00: +60 years old



In parallel with the Korea Festival in autumn 2008, the Palais des Beaux-Arts presents an exhibition devoted to treasures of Buddhist art.

Entertainment in Bruxelles

Exhibitions

Cobra & Cie

Place : Palais Des Beaux Arts - Bozar
Address : see above
Price : free



This exhibition, which runs parallel to the major retrospective COBRA at the « Palais Des Beaux Arts » , proposes to revisit, through prints, engravings and other printed matter, the work of major artists of the postwar period, Brussels, Copenhagen and Amsterdam. More than half a century after the official dissolution of this particularly dynamic movement , which brought together from 1948 to 1951 the aspirations of a large group of artists in northern Europe, his « souffle vivifiant » has continued generating enthusiasms. With works of Alechinsky, Dotremont, Asger Jorn, Corneille, Karel Appel, etc. ...

Musée Magritte (Museum)

Address: Rue Essegheem 135, 1090 Bruxelles
Open from Wednesdays to Sundays
Hours: from 10am to 18pm without interruption
Price: 7 euros for adults



René François Ghislain Magritte (1898-1967) was a Belgian surrealist artist. He became well-known for a number of witty and thought-provoking images. « *My painting is visible images which conceal nothing; they evoke mystery and, indeed, when one sees one of my pictures, one asks oneself this simple question, "What does that mean?". It does not mean anything, because mystery means nothing either, it is unknowable.* »

