

INTERNATIONAL WORKSHOPS

ARCHITECTURE AND BIONIC

The INTERNATIONAL WORKSHOPS OF ARCHITECTURE AND BIONIC were born in 1993 with the will to become an international alternative for a complementary formation in the field of the project and investigation of new tendencies in Architecture, Arts, Thought and Nature. The basic characteristics of these courses part from the consideration of the nature like source of permanent and essential values. The understanding of the "techniques" that uses Nature for "creating" its forms is the synthesis of "bionic" artistic sensitivity. The application of the Bionic Science to the Architecture makes of these Course-Workshops a unique experience that opens to an innovating line of research and thought.

In the believing that the present moment claims, more and more, an attitude of reflection about our relationship with nature, learning from the natural mechanisms, with million years of experimentation and depuration of their strategies, is the base of the International Workshop of Architecture and Bionic

The union of the following concepts: Biology, Engineering, Architecture and Eco-Philosophy, allows open new fields to the Thought and to the Art. Bionic science approaches to the architectonic project, fixing its goals in the development of a humanized habitat and in the profit of a reasonable balance between Technology and Nature.

Words like bio-climatic, bio-construction, sustainability, eco-urbanism, etc., which were hardly used some decades ago, have now become protagonist of many present speeches and taught. All of them declare, from diverse angles, a serious preoccupation by the way in which we have decided to conquer the planet. The alternative to confront future is to learn the lesson that Nature offers us "to get more with minimum effort", it is to say the optimization like inexorable law, with the objective to encourage an attitude of coexistence with the total reality of the Universe.

So the goal of these courses is to find a way to reach a reasonable balance between Technology and Nature. The proposal of bionic science is simply a return, once again, to Nature, with the objective to encourage an attitude of coexistence with the total reality of the Universe. We could resume saying "Learning from Nature, building the Future".

The INTERNATIONAL WORKSHOPS OF ARCHITECTURE AND BIONIC are mainly focused on the followings subjects:

- * Ecology, Sustainability, Thought, Art and Architecture*
- * Bio-Structure Concept: Saving and Efficiency Mechanisms*
- * Dynamic Geometry and Fractal Project*
- * Genesis of Form in Nature: Optimum Form and Project of Minimum*
- * Principles of Bioclimatic Architecture*
- * Biogenetic and Autoorganization Principles*

Place of Celebration

Spain

The International Workshops of Architecture and Bionic have been celebrated since 1993. The permanent venue is in the Humanity's Patrimony City of Cuenca (Spain). The incomparable historical frame of Cuenca city and the enormous wealth of its surrounding landscapes make of it the ideal place for the development of the Workshop. Thanks to the agreement signed in 1997 with the "Excelentísima Diputación Provincial" of Cuenca, this city has become the annual permanent place of the Workshops, being celebrated in the Antonio Pérez Foundation, located in the privileged and singular ancient City.

Colombia

During years 1997-200 the Workshops of Architecture and Bionic were celebrated in Colombia, in the city of Montería, thanks to the agreement signed with the Sinú University

INTERNATIONAL CHARACTER

Students

The international character of the Courses of Bionic and Architecture has attracted many students coming from all around the world. Students that have attended to them have come from countries such as: Italy, the Netherlands, India, Colombia, Mexico, Uruguay, Peru, Chile, Cuba, Venezuela, Rumania, Venezuela, Portugal, etc.

Professors

Prestigious professors of diverse nationalities have collaborated with the Workshop from its beginning. Till now lecturers have come from: Spain, Italy, Portugal, Colombia.

PROFESSORS AND LECTURERS STAFF

Co-directors and Permanent Professors:

JAVIER PIOZ and **MARIA ROSA CERVERA** are the founders and directors of the Courses of Architecture and Bionic. They also are founders of the firm "CERVERA&PIOZ, Architects". Both are Ph.D. architects and Professors of Polytechnic University and Alcalá University respectively. They have been awarded with the GOLDEN GLOBAL AWARD (Singapur 2008) for their Research in Bionic. Their work as architects is well known and published all around the world. Among their works appears the project of Bionic Tower Vertical Garden City, an innovative proposal based on Nature.

Invited professors during last years

A large number of prestigious lecturers have participated as invited professor during last years. Among them the following:

FEDERICO GARCÍA MOLINER

Professor Contemporary Physic, Jaume I University. "Príncipe de Asturias" Award

CARMELO DI BARTOLO

Professor Montreal University. Founder and Director of Design Innovation, Milán-Gran Canaria

MANUEL TOHARIA

Director "Príncipe Felipe" Science Museum, Valencia

PAOLO TRINCADO

Director National Technology Museum, Portugal

ANTONIO RUIZ DE ELVIRA

Professor Physic, Alcalá University. Expert Climate Change

JAVIER MADERUELO

Professor Landscape and Architecture, Alcalá University

JAVIER ORBATÍ

Geologo. Founder and Co-Director EVREN, Natural Resources Evaluation

JAVIER NEILA

Professor of Architecture. Madrid Polytechnic University.

JOSÉ LUIS MERCADO SEGOVIANO

Architect. Ex Director School of Arts and Crafts, Madrid

PABLO RAMÍREZ BURILLO

Architect. Professor y Ex Director School of Art, Madrid. Expert Landscape and Bionic

GUSTAVO DE TERESA BALSEIRO

Architect

ANTONIO CERVERA SARDÁ

Ph.D. Engineer. Author of the Eco-philosophical Critical book

MIGUEL ANGEL MILA

Designer. Director of “Centro de Diseño”, Castilla-La Mancha

MIGUEL ÁNGEL MARTÍNEZ CASANOVA

Professor in Chemistry, Carlos III University

JUAN BAUTISTA ALBANCHEZ

Landscape Architect. Médico. Ex Director Sinú University, Colombia

MARIAN CASTRO

Architect.

JESÚS ILDEFONSO DÍAZ DÍAZ

Profesor Mathematics, Complutense University. Royal Academy of Sciences Member

DIEGO MANUEL LUZÓN PEÑA

Ex Dean School of Law, Alcalá University

MAURO COSTA

Architect, Expert in Bionic, Portugal

THEORETICAL AND PRACTICAL LESSONS

The Workshop takes place during one week (4-6 days) and it is organized so much by practical exercises as by theoretical lessons and master classes.

The Course combines outdoors and indoors classes including theoretical lessons about bionic, debates on contemporary themes, and practical and projectual exercises of bionic analysis and application of the natural mechanisms to the resolution of architectonic subjects.

Themes such as bio-structure concept: saving and efficiency mechanisms; fractal geometry, dynamic geometry and fractal architectonic project; genesis of form in nature; optimum form and project of minimum; ecology, sustainability and architecture; principles of bioclimatic architecture; biogenetic and auto organization principles, etc.

PUBLICATIONS

Annually the different lectures are published in a book edited by the Department of Culture of the Diputación Provincial of Cuenca.

Till date have been published: ARCHITECTURE and BIONIC I (2001), II (2002), III (2003) and IV (2004), V (2008 –in press-).