LISTINGS,
Reports, Books and Conferences

LOW ENERGY ARCHITECTURE AROUND THE WORLD

Pushed Slab, Paris, France

MVRDV unveils creative design for a low energy building in Paris

Dutch architects MVRDV and French developer ICADE Promotion have partnered on the design of a €35m energy efficient office building at ZAC Gare de Rungis in the 13th arrondissement of Paris. The 19,000 sq m building, which is designed to be totally flexible to accommodate one or multiple tenants, will be one of the first low energy buildings realised in France; with low energy consumption and an energy production of approximately 200,000 kWh per year.

Dubbed the Pushed Slab building, for the shape the building takes when the slab is 'pushed' until it breaks then twisted and pushed to the south, the building is designed with two different faces to address two completely different urban grids. On the north side, the building exhibits a calm demeanor in dialogue with the dense urban fabric of the north side of Paris. On the south side, the building is more dynamic. When the slab is pushed, it causes the building to break, creating an opening that frames a view of an historic building. This pushing action also distorts the floors, animating the building's form and creating opportunities for terraces that can be accessed from work areas and from the external staircases located off the plaza.

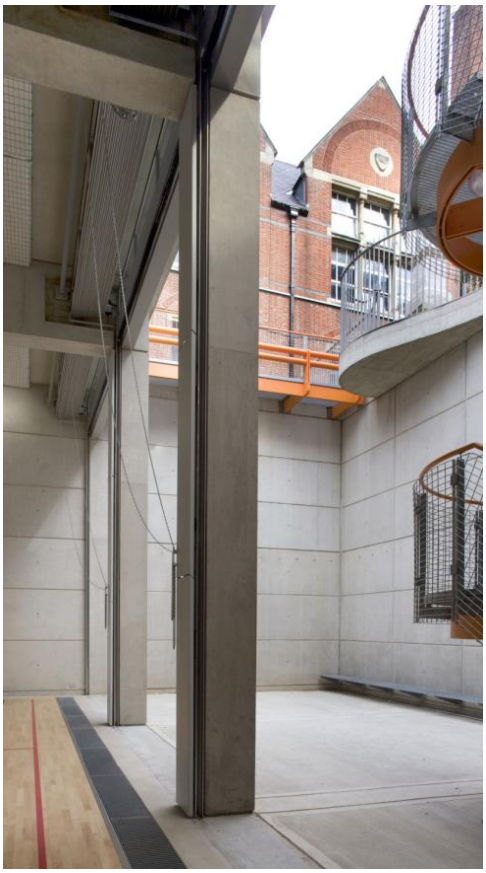
The building is wrapped in a skin of certified wood and ribbon windows that are strategically angled to bring natural light into the interior spaces. Energy savings will be achieved through the use of natural ventilation, 1500 sq m solar panels on the roof, a grey water system, and exterior insulation with a projected energy consumption of 49 kWh per sq m per year.

According to the Jerome Coumet, the mayor of the arrondissement, the project is part of 'the first Eco-quarter in Paris'. Construction is expected to commence in 2011.

St Marylebone School, London, United Kingdom

Gumuchdjian Architects Expand Inner City School

St Marylebone School is located in the heart of the Marylebone Conservation area, in close proximity to Grade 1 and Grade 2 listed buildings.



The small 'inner city' state school caters for 900 girls and had less than 5% of required outdoor space, no dedicated gym, no refectory and zero accessibility for the disabled.

Expansion through the purchase of neighbouring sites was restricted due to the location of the school in the heart of the most expensive real estate in the UK.

The proposal was therefore to locate the PE/Drama facility below the existing playground and to construct a new classroom block.

The underground facility opens onto a lower courtyard which provides daylight, and fresh air and dispels the typical negative impressions of below ground development.

Both buildings were designed as low energy buildings using conventional environmental systems.

Although primarily concerned with providing additional facilities the project re-orientates the campus and for the first time provides disabled access.

Trinity Hall, Cambridge, United Kingdom

150 undergraduate rooms and graduate flats

Winning design provides 150 new undergraduate rooms and graduate flats adjacent to the College playing fields and gardens in the Storey's Way conservation area.

The buildings are laid out in terraces of houses, creating open landscape courts and a green lane linking the new development with the existing College gardens and residences in the grounds of Wychfield House to the north of the site.

The design uses a blend of traditional materials with modern detailing and construction to provide efficient, low energy buildings.

Sustainable aspects of the design include good day lighting and orientation of all rooms, high levels of insulation and heat recovery on the bedroom and bathroom ventilation systems.

Rainwater is stored for irrigation of the extensive gardens and recycling facilities are provided for each house. The scheme is a car free development with extensive cycle parking.

Small groups of en-suite rooms, clustered around access staircases from the gardens are linked to form houses of 12 to 18 students sharing common rooms and other facilities.

The site has its own porters lodge, study rooms and computer room.

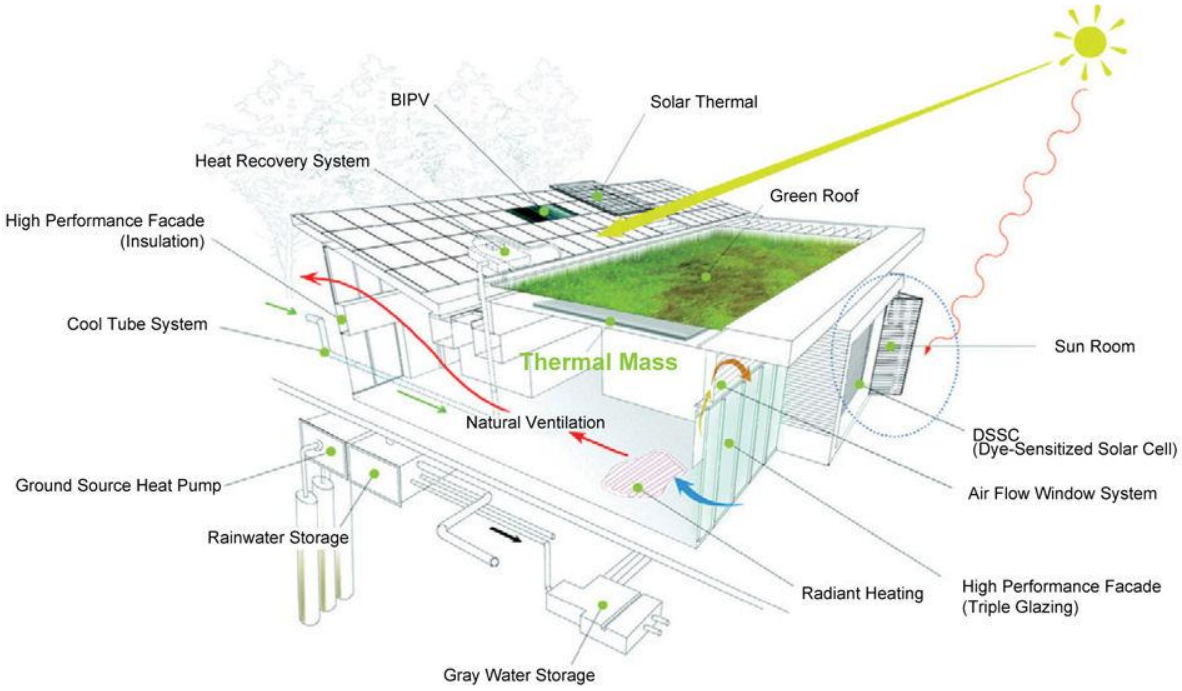
Green Tomorrow, Yongin, South Korea

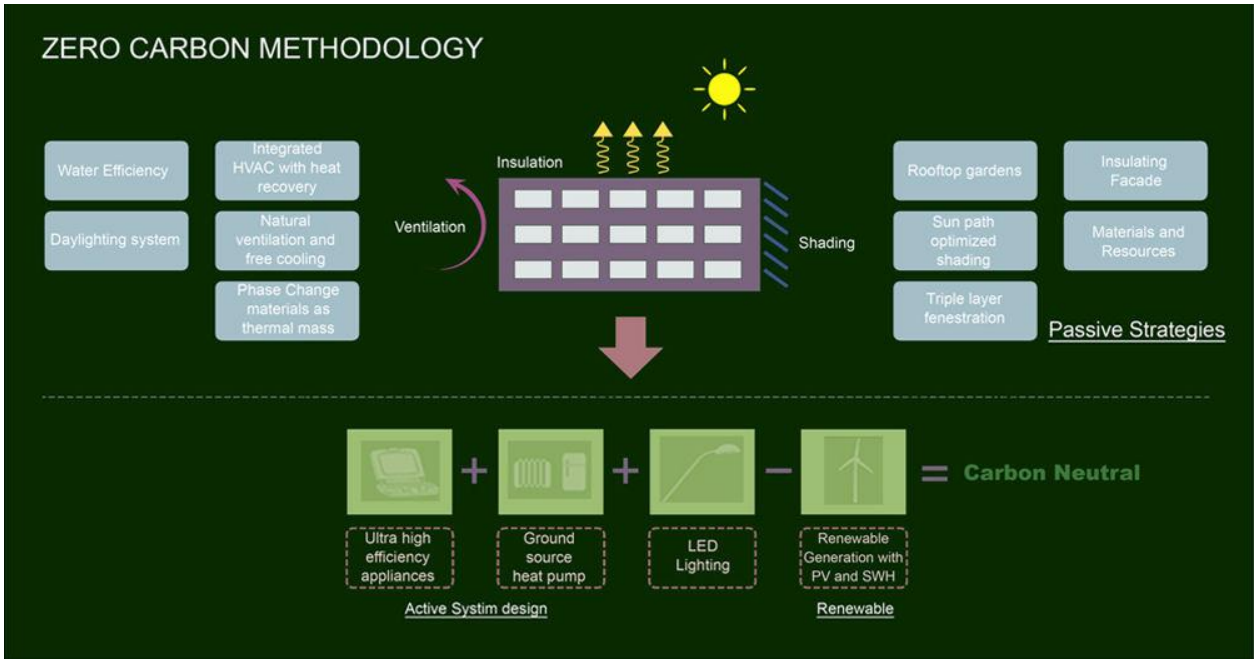
Eco-friendly residential complex designed to achieve zero energy consumption

Green Tomorrow is formed of two buildings - Zero Energy House (ZEH), a single-story house of 423 sq m and PR Pavilion, a double-story office building of 298 sq m. The ZEH is designed to house family of 4 and claims to achieve zero energy consumption.

The design process for low and zero carbon buildings begins by first assessing the local situation and design benchmark, and then proposing an appropriate target that is feasible for the local context (climate, materials, availability of renewable sources etc.). This project, designed by SAMOO in collaboration with ARUP Hong Kong, demonstrates all above sustainable and environmentally friendly aspects through being the first zero energy residential building in Korea as well as the first LEED Platinum project in Korea. Recently, GREEN TOMORROW won the Green Leadership Award in the Residential Architecture in the BCI Green Design Award 2010 competition.

The main concept of this project is to adopt the sustainable design techniques into a traditional Korean architecture, promoting public awareness on energy saving and proposing a prototype of a green urban housing unit that accommodates a living space best suited for Korean climate and lifestyle. Architecturally, the primary intention is to step away from the building's self-perfection approach and allow the building to communicate with the exterior space in order to follow the layout of the traditional Korean architecture. In the Zero Energy House (ZEH), the energy efficient and simplistic approach to spatial configuration is provided as the corridor becomes referential dividing line between the two zones of north and south. The south of the corridor is designed for regularly occupied spaces, which are living room and bedroom, whereas the North of the corridor is considered for temporarily used spaces.


BIPV
Solar Thermal
Heat Recovery System
Green Roof
High Performance Facade
(Insulation)
Cool Tube System
Thermal Mass
Sun Room
Natural Ventilation
DSSC
(Dye-Sensitized Solar Cell)
Ground Source Heat Pump
Air Flow Window System
Rainwater Storage
Radiant Heating
High Performance Facade
(Triple Glazing)
Gray Water Storage



On the Far East side of the building lies the Korean Room, which resembles a traditional Korean summer pavilion, which is normally located near a lake as an independent entity in full openness. This traditional Korean architecture attempts to provide an eco-friendly space. The gallery space of this Korean room acts as a buffer space for energy savings and, therefore, double skinned facet is installed. The interior environment of the building is designed to raise the comfort level by using the optimal amount of heat, light, and air.

BOOKS ON LOW ENERGY ARCHITECTURE

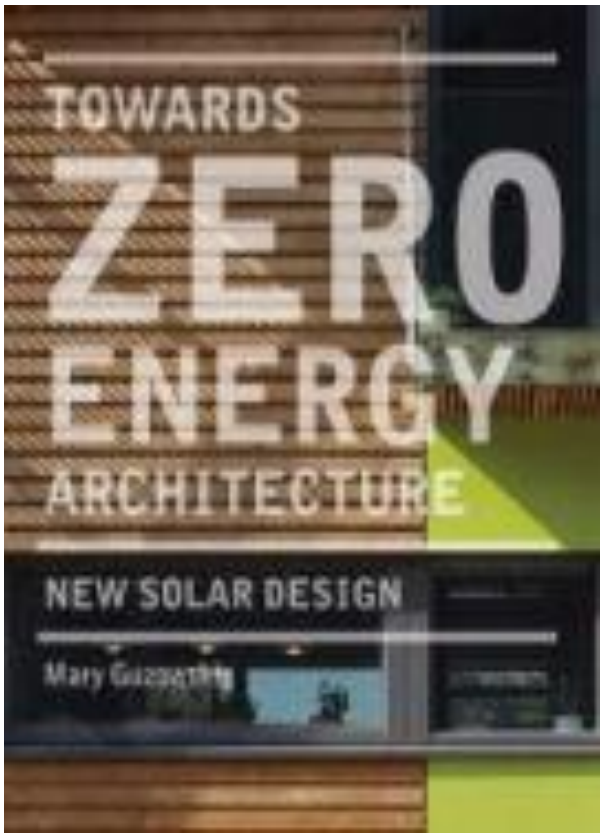
TOWARDS ZERO ENERGY ARCHITECTURE: NEW SOLAR DESIGN

GUZOWSKI, MARY

Today, more than ever, architects must re-engage the forces of the sun to respond to the profound challenges of global warming and climate change. "Towards Zero- Energy Architecture" is a much needed call for the design professions to redefine architecture to help alleviate ecological problems. This book explores the theories, practices and principles of new approaches to solar architecture that foster both design excellence and low-energy use.

Solar architecture is more than the sum of passive strategies, technological systems and ecological engineering. An architecture shaped by the sun responds to climate, place and site, and expresses an aesthetic based on the form-giving attributes of these environmental forces. To illustrate this, the author analyses ten award winning buildings from around the world, focusing on the details of the design strategy, the impact of local climate and the importance of seasonal changes in sunlight and wind strength.

She further shows how new technology enables architects to achieve greater performance standards, while at the same time generating an environmental aesthetic. As well as its significance to architecture, this approach to building provides a critical means of integrating sustainability in our daily lives.



ISBN13: 9781856696784
Publisher: LAURENCE KING PUBLISHING
Pages:208
Published: 01 October 2010

BIODIVERSITY FOR LOW AND ZERO CARBON BUILDINGS: A TECHNICAL GUIDE FOR NEW BUILD

WILLIAMS, CAROL

The built environment has the potential to have a major impact on biodiversity, not least with the increasingly demanding requirements to design more energy efficient and airtight buildings, leaving less space for species to inhabit. Up until the publication of this book, there was no one place where architects, developers, consultant ecologists, and all those involved in low and zero carbon buildings could find out about how to incorporate provision for biodiversity within their developments. In this groundbreaking book, author Dr Carol Williams has specially commissioned architects to produce some much needed model designs and practical guidance for the industry.

The book also provides a useful summary of all the legislation. Authored by Dr Carol Williams of the Bat Conservation Trust and Chair of the UK Green Building Council (UK-GBC) Biodiversity Group, the book is also supported by Natural England and the UK-GBC. This is an essential read for architects, developers, contractors, asset managers, landlords, consultant ecologists, planning officers and building control officers.

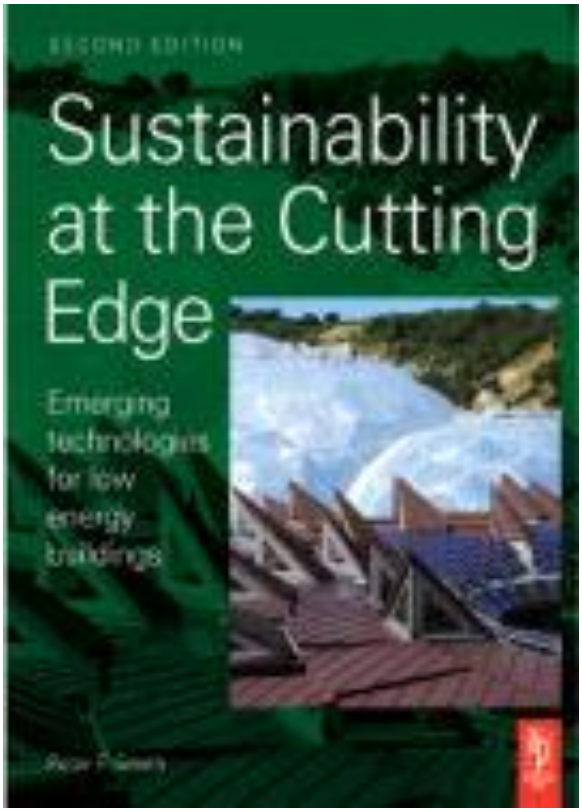
ISBN13: 9781859463536
Publisher: RIBA ENTERPRISES
Pages: 96
Published: 01 March 2010

SUSTAINABILITY AT THE CUTTING EDGE: EMERGING TECHNOLOGIES FOR LOW ENERGY BUILDINGS

SMITH, PETER

Describes how buildings can be made to significantly reduce their reliance on fossil-based energy by the use of solar and geothermal resources. This book also describes a range of renewable energy generating technologies. "Sustainability at the Cutting Edge" is an essential guide to understanding the future direction of sustainable technology. This fully updated new edition deals not only with current best practice and state of the art case studies, but with the very latest emerging technologies which will transform the relationship between buildings and energy. Professor Smith describes how buildings can be made to significantly reduce their reliance on fossil-based energy by the use of solar and geothermal resources.

He also describes a range of renewable energy generating technologies. As sustainable building becomes increasingly essential with the advance of climate change, government legislation and international treaties, this is valuable knowledge for every architect, engineer and designer.This immensely practical book is packed with useful diagrams, charts and colour photographs to illustrate a variety of the most recent case studies, including the education building, the Core, at the Eden Project in Cornwall. As well as exploring cutting edge developments in photovoltaics (PV) this revised edition also includes the latest data from the 2006 Carbon Trust report on wave and tide, and new material on the latest advances in bioenergy and marine technologies.



Buildings are currently a major part of the carbon emissions problem. This book indicates how they may become part of the solution. This book introduces the very latest in practical sustainability techniques.

It serves as a first point of reference for all architects and engineers who want their designs to be both responsive and cutting edge. It also contains useful diagrams, graphs and photographs to illustrate the diverse technologies being developed to create optimum eco-efficiency in our built environment.

ISBN13: 9780750683005
Publisher: ELSEVIER SCIENCE & TECHNOLOGY
Pages: 196
Published: 19 February 2007

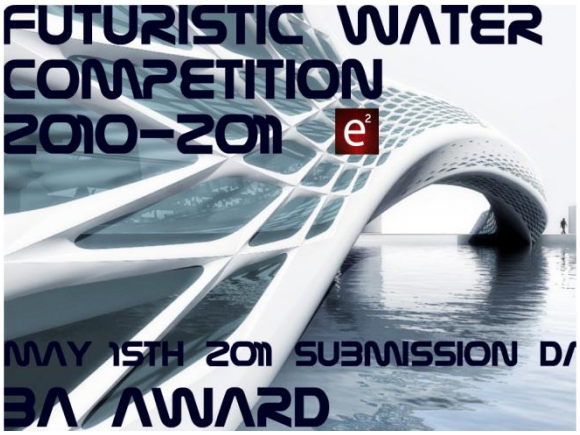
COMPITITION

Competitions are ordered by date of final registration -they are referenced by country of origin, but most are open to international entry.

UK: Biological Architecture Foundation -Futuristic Water and the bio reef diversity theory - City design Competition

Submissions deadline: May 15th

Design challenge: The bio-mechanical futuristic water competition, is the International call for serious ecological ideas for the design of the biological mechanical village or urban quarter of the city - For the city of London, The competition seeks to apply a biological mechanical approach to the future environments of the city, applying the values of bioreef diversity . (the bio mimicry of our great origin and ancestors the coral reefs as the image and problem solver of our future city), the city is limited in growth and marooned through the implementation of the green belt. The areas for expansion are either through the current high density processes, which begin to populate flood plains, or to move eastwards denseifying east London breaking through the green belt towards the Thames estuary, where a new second generation London could rise from the waves. The idea is not new, the Thames estuary has been the topic of intense debate through the possibility of building a floating island airport off the coast of Kent, and a nature reserve with a flood gate connecting Essex and Kent in its core via a high speed monorail, These radical approaches cannot be discarded without intense exploration, Could the next east London generation be a floating one?



USA/Canada: Holcim Awards For Sustainable Construction

Entries to be submitted online by March 23, 2011.

The 3rd International Holcim Awards competition is open to: sustainable building and civil engineering works; landscape, urban design and infrastructure projects; and materials, products and construction technologies. The competition celebrates innovative, future-oriented and tangible projects and visions from around the globe and is open to anyone involved with approaches that contribute towards a more sustainable built environment. The Awards competition is comprised of five regional competitions in 2010/11 and the global phase in 2012.

USA: Low Carbon Restaurant Competition

The deadline for entries is March 15th, 2011

The Global Design Competition aims to collect a broad variety of design solutions for low carbon restaurants by any means possible, including but not limited to reduction in the need for electricity, food product choices, localized power generation and waste energy capture and reuse. Toward this goal, entrants are encouraged to re-envision the kitchen and dining space, not as a room of separated appliances fulfilling individual functions, but as a whole functioning system of cooperating elements in which potential ambient energies such as passive solar light and heat and seasonal cold are utilized and waste energy and materials are recycled in the most efficient manner. The carbon score of the overall design will include the embodied energy of all food ingredients, including energy used to grow, harvest, process and package and deliver the ingredients. Designs that integrate food growth are encouraged. The primary consideration is elimination of the need for electricity in operations. The next priority is elimination of the need for energy in the manufacture of equipment and the site's building materials. The third priority, embodied carbon of the food and beverage products, will be included in the over all score as a separate aspect from the energy use in the kitchen and dining room.

Russia: "Under the roof of home..." 2011.Competition «Two things»

Deadline for applications is March, 11, 2010

Grand Prix Competition

One thing is an object, an element or even a master-piece. Two things make an ensemble . Two things form interior space. The stylish interior space where all elements play their own roles like in the performance. Ensemble, talk, dialogue, or maybe dispute, contradiction, conflict evoking contrast, unity and battle, yin and yan of complex human world of objects. Competitors of "Two things" should reveal this nice chattering or a talk in an excited tone. They should not only interpret the idea of interior design project to the visitors but reveal its inner sense. «Two things» is a simple model of the world of objects where a human being lives, a model of the world of the world he is building himself. Designer, Artist or Architect aims to study it, mark the main idea and cut off minor elements, realize its principles, trends and laws of development of this world. All your ideas you may implement in any installations. Choice of elements, materials, effects and colour is at your wish. We provide you with space from 1sq.m up to 10 sq.m for installations.

Spain: Lamp Lighting Solutions Awards '11

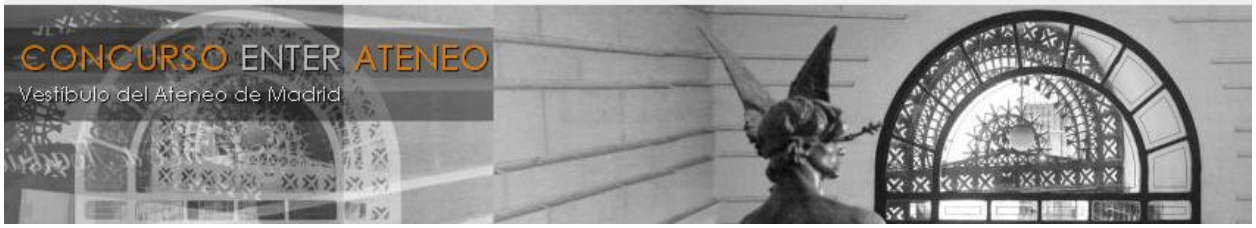
Registration for the awards can be made on-line until 28 February 2011.

Light is a fundamental element of life and a key aspect of any architectural project. Prizes will be awarded to projects that have successfully met the architectural lighting needs of an interior or exterior space, having created a positive synergy between architecture, interior design, landscaping and lighting. The Lamp Lighting Solutions Awards value the creativity, innovation and sustainability of lighting projects, regardless of the manufacturer or the brand of lights used in the project.

Spain: Capture: Architecture Photography Competition

Registration Deadline 24th Feb 2011

First International Architecture Photography Competition organized by OPENGAP. This is an anonymous competition, whose theme will focus around contemporary architectural spaces. The submitted digital images can be color or black and white format. We encourage all architects, photographers, artists and people interested in the subject, anywhere in the world to participate in the competition. Contestants may submit up to three images per entry (all of them from same author). Each of these images can separately be selected by the jury.



Netherlands : output Award 14

Deadline for submissions: February 18th 2011 :output is an international competition for students in design and architecture. The works selected by the jury will be published in the :output publication. Works carried out by students usually disappear into drawers after presentation to a relatively small college audience. There the work remains invisible. We want to change that.

Mexico: Hotel Centro 2010

Registration Deadline Feb 18th 2011

CoARQ invites all architects, designers and architecture students to participate at the Hotel Centro 2010 International Ideas Competition. This contest involves an estate located in the downtown area in Guadalajara. This city was founded in 1542 by the Spanish conquers and the streets that surround the estate were drawn up from those times. A couple of years ago, the last building that was built during that era, was demolished and has left an empty space in one of the places with most historic relevance in this city. This is why the Hotel Centro 2010 International Ideas Competition challenges to design a hotel dedicated to the recreational and cultural tourism that constitutes a building of architectonic relevance that coexists with the immediate context, integrated by buildings constructed between the 16th and 20th centuries.

UK: Ullswater Yacht Clubhouse

The deadline for submission of designs is 15th February 2011.

The Royal Institute of British Architects (RIBA) Competitions Office has been appointed to organise a design competition for a new Clubhouse Building for a Yacht Club in Cumbria. Ullswater Yacht club is located in the heart of the Lake District National Park, on the north east shore of the beautiful lake Ullswater, England's second largest lake. The Club is unrivalled in its facilities both on and off the water, providing easy access for dinghies and keelboats, and a sailing area. The Clubhouse suffered extensive damage in the floods of November 2009 and although structural repairs have enabled the club to continue to function since, the long-term view is that a new Clubhouse is needed. In addition to providing the club with a facility capable of withstanding future flooding, a new building will also provide increased and improved accommodation for an increasing club membership. The competition will seek design concepts for the new 500 sqm (approx) building, providing the club with a functional, welcoming, practical and flexible facility that through its architectural features will take into account associated flood risk.