

exploring the hybrid condition

## Belgian Jury Report

Date: May 21st, 2008  
Location: Febelcem, Brussels

### Jury Members:

Manuel Rocha de Aires Mateus  
Rob Nijse  
Olivier Bastin  
Kersten Geers  
Adrien Verschuere

### Observing Members:

Jef Apers, organizer  
Guy Châtel, secretary, national coordination  
Siebe Bakker, international coordination

### Schedule:

1. Briefing about the competitions background, concept and target.
2. Explanation and discussion of the design assignment
3. Jury

### Participation:

18 entries, 3 team works, 15 individual works  
23 students involved, from 10 schools.  
i.e.

18 students from 7 schools in the Flemish Community  
5 students from 3 schools in the French Community

Beside the schools of architecture, 3 schools providing for a education in interior design were involved.

### Jury Procedure:

The jury chooses not to elect a chairman.

As a group the jury proceeds to a first elimination round.

Projects that don't clearly address the theme of the competition are eliminated.

Open discussion about the merits and limitations of the projects considered.

The jury is struck by the diversity of approaches prompted by the assignment. At least three categories of work can be distinguished:

- work focussing on the material and/or technological questions related to the theme,
- work developing an architectural proposal out of a (more or less) precise notion about material or technological aspects induced by the theme,
- work on an architectural project rooted in the conceptual field inferred by the theme.

The jury does not want to discriminate between these categories and decides to grant prizes to the best work in each of them.

In the first category BV007 clearly stand out, in the third RL384. In the second category PP413 and OO717 distinguish themselves. After discussion PP413 is chosen for the prize and OO717 for a honourable mention. The jury decides however to divide the 4000 euro prize money equally between those four entries.

**Result:**

3 prizes (all for individual work), each of them granted with 1000 euro and participation to the Master Class.

1 honourable mention (for individual work), granted with 1000 euro, and a follow up position for participation to the Master Class.

**Jury Comment:**

**On the Belgian entries 2007/08 and the competition as such:**

With a total of 18 entries implying the work of 23 students this competition cycle is less successful than the second edition. There is still a problem of quality about the entries. The fact that three out of the four awarded entries are issued from the same school and studio demonstrates that the range of quality obtained is very close to the one prevailing in a current studio. This reveals that the competition is, much more than expected, dependant on the active participation of regular studios organised in schools, and that the objective to appeal to ambitious individual students does still not come out.

Suggestions are made to open up the competition to young professional trainees. The jury members are indeed convinced that the need to take up opportunities to distinguish oneself, is much more acute in this group than among students whose first preoccupation remains to obtain a diploma.

On the other hand the participation of some students affiliated to three different interior design schools is a positive evolution, witnessing that the renown of the competition is extending.

While the jury members express their support to the principle of an open questioning and a brief focussed on qualitative aspects of concrete as a material and a technology, they recommend to avoid vagueness and ambiguity in its formulation. The full benefit of the involvement of a famed curator will be obtained if the participants are clearly challenged to take position with a project conceived as an architectural statement.

**On the specific entries:**

**BV 007:** (1st prize ex-aequo, 1000 euro + Master Class) Berten Vandael, Provinciale Hogeschool Limburg PHL – Architectuur, Diepenbeek.

This entry entitled 'Luminous Concrete' is conceived as the report of a genuine research about the possibility of manufacturing photo-luminescent concrete. The research is based on the adduction of aluminates in the composition of the concrete. While the tests lead to an efficient factor of light restitution, they impinge against a high production cost and a decrease in strength. Further research on a concrete based paste with adduction of thermosetting plastics proves to be more successful and applicable to various surfaces. The proposal includes various examples of possible architectural and infrastructural use of the luminescent concrete finishing. The panels used for the entry itself were appositely coated with the product.

**PP 413:** (1st prize ex-aequo, 1000 euro+ Master Class) Wouter Dreessen, Provinciale Hogeschool Limburg PHL – Architectuur, Diepenbeek.

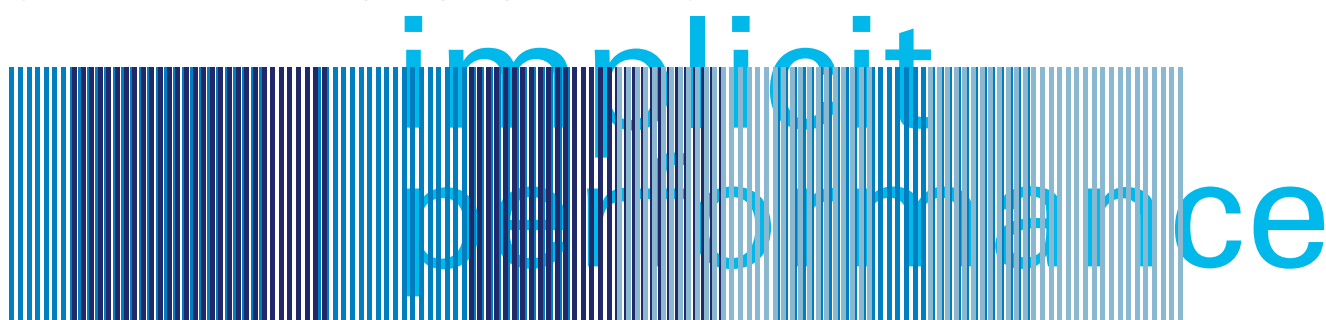
The entry is based upon the recent development of so-called organic concrete, a product engineered with the purpose to retain water. Because of its property to release humidity gradually it can provide for a proper substrate for organic growth. The entry focuses on the architectural implications conveyed by the very existence of this material. Sharp distinctions between the natural and the fabricated are brought out of balance. The project is conceived as an enclosing landscape. By choosing for a cave-like spatiality, it pretends to challenge the reliance of architecture on geometric principles and its propensity to spell this out through tectonics.

**RL 384:** (1st prize ex-aequo, 1000 euro+ Master Class) Radim Louda - ISACF La Cambre, Brussels.

This project is an intervention on the site of the 'Place des Sciences' in Louvain-la-Neuve. The Library, the first building on site, plainly erected in bare concrete, is considered as being one of the last convincing representatives of an architecture celebrating devotion to design. The argument is put forward that the existing square doesn't match up to this historical status and monumental quality. The project superimposes a additional figure to the building configuration around the square. The ordered pattern of the underground structures are dug out, exposed and worked out to redefine them as the common base to the buildings. The informal square is thus replaced by a cloister court, a strong figure reuniting the scattered edifices and bringing up implicit monumentality into physical presence.

**OO 717:** (honourable mention, 1000 euro) Hans Ooms, Provinciale Hogeschool Limburg PHL – Architectuur, Diepenbeek.

This entry is to be situated in the same register as PP 413, trying to adjust architectural thought to technological development. 'Conkevlar' being a laminated system of concrete and Kevlar fibre allows for the fabrication of thin structural shells. The project takes inspiration in aeronautic design (the aircraft wing) to elaborate a proposal based on tubular wide span structures out of this concevlar. However, the architectural proposal is quite vague and rather loosely related to the engaged technology.



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## German Jury Report

### Award Winner

**CJ 980 solarconcrete**

**Barbara Graßl, Technical University Munich**

The “solarconcrete” work shows the development of a proposal whereby precision-mounted elements in a concrete wall provide an additional means of “capturing” the sun’s rays during the cold seasons of the year. The thermal energy so captured is then fed into the inside of the building in shifted phases through the concrete wall with high storage capacity. The solar elements developed by the project consist of a moulded Plexiglas part connected to an absorption element and an aluminium casing. These solar elements are integrated in concrete walls and provide not just an additional energy source but also offer their own powerful aesthetic appeal in keeping with the character of the concrete wall and with manifold possibilities for extended design.

The project is rooted in sound technological research. All its technical aspects – from the way the angle of incidence of the sun’s rays varies from season to season to the material characteristics of the various components – are investigated and presented with great conviction and plausibility.

The way the work links in with the theme of the “hybrid” is particularly rich and illuminating. This also has to do with the way the work combines aesthetic appeal with technological functionality. The author has achieved a subtle blend of aesthetic added-value and technical specifications. Not the least of the outstanding merits of this work - apart from its high quality of design and masterful constructive planning – is the elegance of its implementation and the way it invites further development. Thus it would be interesting to investigate whether any excessive amounts of thermal energy produced during the summer months could be further minimised below the set limits or whether they could be used as an addition energy source for building services.

### Award Winner

**FX018 underground station**

**Felix Wurst, Leibniz University Hanover**

The “underground station” project shows the compelling use of experiments in space and light and their exemplary deployment in a design proposal for the HafenCity in Hamburg. The complex approach adapted to the theme of the competition is apparent from the creative analysis stage through to the conceptual design. Two small photos of an underground station in Moscow and the TWA terminal in New York explain the thrust of the project which is to treat the inner space of public buildings as a spatial experience of distinction. The second track of the analysis develops the main design idea, the doubly curved module over which the project programme and project aims are outlined, giving final definition to the theme of the design.

The work first impresses through the clarity of its presentation, demonstrating as it does the complex interactions of reflection, experimentation and serial studies in modelling and drawing during the work process and how these lead to a compelling solution. Of particular interest is the playful use of parametric design methods. Thus in the exemplary realisation of a Hamburg underground station the focus is not on

the actual module but rather on its spatial impact accentuated by the fall of natural light. This interpretation of the theme of the competition is impressive on more than one level, and especially in the way the design combines ornamental and constructive elements as mutually complementary parts of a single heterogeneous solution. Of outstanding merit too is the way the realisation of the constructive solution is consistently based on full use of all the possibilities inherent in concrete. Even if the supporting structural approach in its blend of supporting and suspended elements is certainly daring, this design concept is well worth considering as a viable project to be built.

**Award Winner**

**JY007 ComfortCapsule Concrete**

**Juliane Greb and Yü Chen, RWTH University Aachen**

“ComfortCapsule Concrete” is a futuristic work with a slight aura of science fiction about it. The point of departure for this entry are the stereotypically negative associations people have about surfaces of concrete on the inside of buildings which are generally seen as cold, bare and sound-reflecting. “ComfortCapsule Concrete” is an attempt to overcome such well-worn notions that makes exciting play with the sensuous qualities of concrete. All the conceivable textural and physical qualities of concrete surfaces are extracted and examined to show the range of possibilities open to the material for application on the inside of buildings.

To achieve this goal a combination of concrete and synthetics has been used. A temperature-controlled transformation process enables synthetic elements integrated in the concrete surface to react dynamically to outside influences and effect positive changes in the quality of the surface.

In terms of its constructive realisation the project is both feasible and consistent. Issues of technical detail such as the actual time span of the distortion process or interaction of the compounds or the formation of cracks in the later added layer of concrete due to temperature deformation in the plastics together with issues of durability and robustness need investigation in further stages of the design cycle.

In short, however, the work is an exceptionally original and refreshing take on the theme of the hybrid. Of particular merit is the way it combines speculative technological innovation and functional added-value while also offering an outstanding quality of design.

**Award Winner**

**KT 215 thermoshape**

**Benedikt Krienen and Gereon Töpper, RWTH University Aachen**

This entry for the competition is a creative response to a critical issue in modern concrete construction – how to produce freely formed double curved concrete elements (such as those used for the building shell).

This theme shows masterful development both in the conceptual and modelling stages. Of outstanding merit is the division of the industrial production of a sandwich element into factory-based formwork, reinforcement and insulation, and on the spot grouting of large-scale elements on the actual construction site. This brings us much closer to the use of computer-controlled realisation of complex geometries for concrete engineering, even if much more research is needed before we can develop viable practical solutions. The concept makes meaningful use of state-of-the-art technologies both in terms of building materials and construction methods and in terms of actual production processes.

At the same time, in harmony with the theme of the competition, both the creative process and the final results make exact use of the characteristics of a variety of base materials to arrive at the definite solution. Thus the work represents an important contribution to discussion of the on-going development of concrete constructions, even if the manner of building in concrete developed so far means that concrete is not suitable for any further structural roles beyond that of its self-supporting qualities.

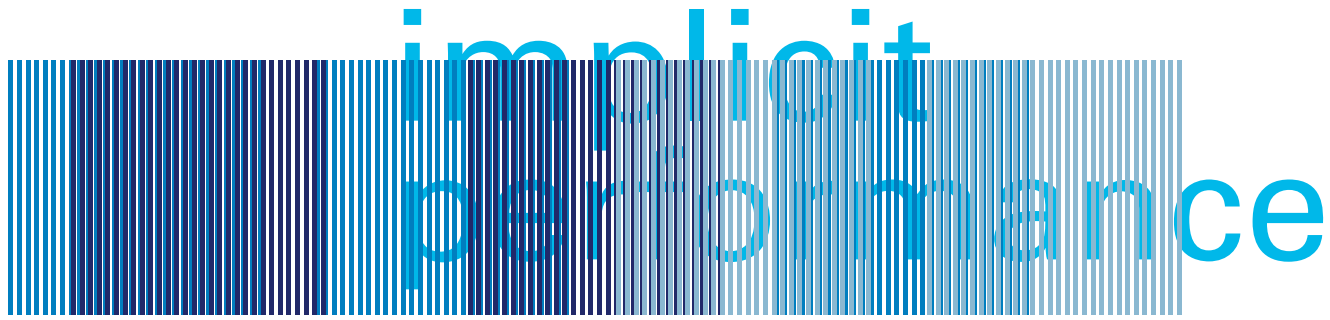
The presentation of the idea is also excellent and readily understandable with the diagram-like comics offering a particularly welcome departure from traditional forms of representation.

**Commendation**  
**LK 111 - Optical-Fibre-Concrete**  
**Lukas Kasten, University of Kassel**

This work takes the model of a light sculpture design as the basis for the production of curved concrete surfaces endowed with optical fibres. To this end it has conceived and developed a special formwork system through to the realisation of a prototype. The result is a sculpture of space and light of outstanding sensual and aesthetic quality. The masterful quality of its realisation was singled out for special praise. However, the project's reliance on existing technologies for light-permeable concrete also raised doubts as to the originality of the project in terms of the theme of the competition. Even so, the work still represents a major contribution to discussions around the theme of the hybrid, while its combination of materials and their given realisation does indeed open up the way to new original solutions for applications of concrete.

**Commendation**  
**X0 815 - FA-MO[U]SS Concrete**  
**Jürgen Utz, Daniel Gross, Benjamin Kinzinger, University of Stuttgart**

This work proposes a system for introducing water-absorbent granules into the surface layer of concrete to make it a suitable habitat for certain species of plant life such as moss. In addition an impregnating layer – designed to prevent the growth of plant life – opens up the way for novel architectural applications. The development and presentation of the work carries conviction yet in terms of design it merely scratches the surface. Some aesthetically highly intriguing solutions are indeed presented, yet what is lacking, for instance, is their deeper development in terms of space or a fuller presentation of further possibilities for their use which the work only hints at. Overall, however, the work offers an interpretation of the competition theme which is both exciting and inspirational in parts, and well deserves its commendation.



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## Spanish Jury Report

### DC288 (WHON)

We like the idea of this proposal due to its originality and because it stems from the local (Canary Islands) context. It leads to a construction process with a transition from the submarine ecosystem to the human ecosystem.

At the same time the organically shaped buildings that evolve are nicely embedded in the historic evolution of architectural shapes when we compare them to work of say Buckminster Fuller or the Le Ricolais. Original we call it because the proposal (which is realistic to a certain extent only) bases on electrochemical processes that reach the boundaries of today's concrete construction with potentially large ecological value because the process of producing calcium carbonate stores large quantities of CO<sub>2</sub> at the same time.

### CS 938

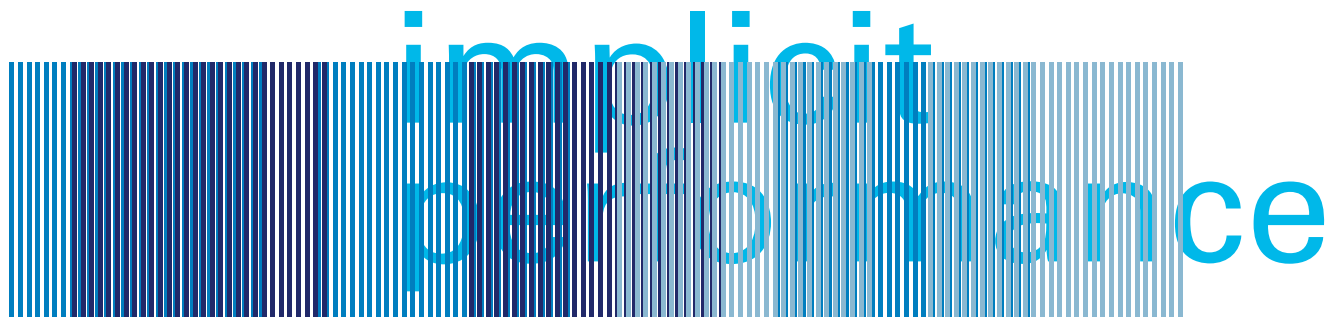
The proposal "Concrete filter" has drawn Jury's interest due to its complete development covering all the steps of the design, from research to an offer of specific applications. Both the operational system and the aesthetic proposal happily meet the light and spatial effects supporting a very specific function as it is the collect of urban pollution in the air

### ET 187

It is a design with a great formal elegance where concrete is presented as a medium of integration with Nature.

The proposal has a formal fragmentation very suitable for imitating organisms or plants. This is confirmed by the aerial views. Tridimensional, self-resisting forms have been avoided, vaulted forms being simple and smart.

The material has a "crackeled" appearance, similar to a lizard's skin, with a great aesthetical interest.



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## Irish Jury Report

### Introduction

22 anonymous submissions were considered by the assessment jury on 27th May 2008; the jury was pleased to be informed subsequent to the assessment that the entries were received from three schools of architecture in Ireland.

The assessment jury considered the general quality of the entries to be of a high standard with around half of the entries making it through the first phase of the assessment.

### Brief

The assessment jury considered the brief to have been well judged and the assignment presented to students allowed for wide range of intellectual responses and investigations while also encouraging and demanding a technical examination of the boundaries of the material. In this regard the jury was of the opinion that while the brief was clear in directing that the proposals should be design-led, the most successful submissions were those which supported the proposed designs with practical and/or technical investigations which demonstrated a more considered understanding of the material and the merit of the proposed application.

We noted in particular the following elements of the brief which we considered to be of particular import in our debate and assessment of the entries :

*The competition seeks to investigate through research and design any notion of Implicit Performance.*

*...applications where concrete forms the basis but is not necessarily the only element at play.*

*We look for concrete surpassing its 'original' performance to the point of becoming a new material*

The Jury considered these extracts from the brief as clear a call for an exploration for imaginative design solutions in the use of concrete with other materials and resources in order to present some new ideas or directions in the use and application of the material.

### Assessment

Of the 22 entries approximately half of the submissions remained in contention at the end of the first assessment round and the jury noted a number of issues and themes which emerged consistently across the entries.

- the structural boundaries of the material
- the development of hybrid solutions of concrete and other organic and solid materials
- the exploration of potential energy and other energy led ideas for concrete use
- the design of concrete and glass elements
- the design of low tech / sustainable designs for repetitive and or prefabricated shelters

While the jury was impressed with many of the individual attempts at investigation and design of proposals in each of the above categories, we considered a small number of entries to have achieved results beyond their initial subject by developing and expanding their design ideas on the material in a manner that reached to the core of 'implicit performance'.

- RA 493 Wearable Concrete

Wearable Concrete is a proposal for concrete shoes which is developed through the use of concrete and soft 'aero beads' to develop a lightweight material that is capable of being moulded and shaped to suit any shape and function such as an handcrafted shoe for an individual foot. A mould is developed to suit the particular foot and the product is then further developed through the integration of wax elements into the mould for the shoe which is then melted to allow for the later fixing of a simple leather shoe strap. The proposal is developed practically and photographs of the modelled shoe as worn are included which demonstrate the aesthetic qualities of the design proposal and its practical application. It was noted that the proposal was well presented and demonstrated a refinement of the original idea together with practical research application of additional lighter materials to achieve a lightweight solution. The Jury noted that the process of solving the many practical problems of associated with the development of a concrete shoe demonstrated the potential of the idea in providing solutions for new uses and performance of concrete.

- LR 311 Mosscrete

Mosscrete is an investigation into the live aspects of concrete and in particular the possibility of exploiting its constituent elements such as lime in forming a living organic material that develops and grows over time. The entry is conceptually very strong and applies first stage of research and analysis on how the organic material could be developed in concrete. The entry also investigates the use of acidic substances such as yoghurts in concrete mixes which would assist in the the cultivation of moss. The Jury was also mindful of the possibility of the use of coarse aggregate porous concrete which could assist the in the retention and development of moss on a concrete surface in an external environment. Moss as a material thrives in damp low light conditions and while in western cultures is regarded as a weed it is highly regarded in other cultures such as in Japanese gardens as bringing a calm or stillness to a scene. While this aspect of the material was not noted in the submission the Jury was impressed with the possibilities of developing a new concrete aesthetic through such a living material and the research that demonstrated this potential permeated through the minds of the Jury and led to much discussion throughout the assessment. It was felt that while the potential of the idea was not fully developed in the entry submission the original research and concept was deserving of high merit.

- FI 802 Inflatable Concrete

Inflatable Concrete was one of many entries to research the application of a reusable formwork to achieve a high level concept of multiple practical building forms or shelters through a low technical solution. The design proposals was the development of a 'flatpack' type formwork which would form a basic human shelter and thereby had the capacity for multiple applications as a low energy building form possibly for developing regions.

The Jury considered the entry represented the best design solution of all proposals which fell into this category and that the application was supported by some small scale technical research through models which demonstrated an understanding of the potential of the material.

The design proposal did not push the boundary of the performance of the material in a manner that surpassed its original performance; nevertheless, through application, construction and delivery the proposal was highly regarded by the Jury.

## Results

The three Irish projects selected by the jury to go forward to the International Final of 'Implicit Performance' : Third International Concrete Design Competition for Students, were:

- RA 493 Wearable Concrete
- LR311 Mosscrete
- FI802 Inflatable Concrete

The Jury also selected entry no. GC 013 as the reserve finalist, should a reserve be required.

The Jury was most impressed with entry no. RA 493: 'Wearable Concrete' as the entry which exploited the potential of the brief in a real and imaginative manner and presented a technically developed proposal with an aesthetic quality that was most impressive. The jury decided to award this entry the top prize of 1,750.00. We were also very impressed with the thinking and concept behind entry no. LR311: 'Mosscrete' and we considered that the submission demonstrated a potential that was unique amongst the entrants and we awarded a second prize of 1,500.00 to this entry. We also awarded a third prize of 750.00 to FI 802: 'Inflatable Concrete', being the best application of a concept for high level production of a simple concrete formwork.

### **General Comments**

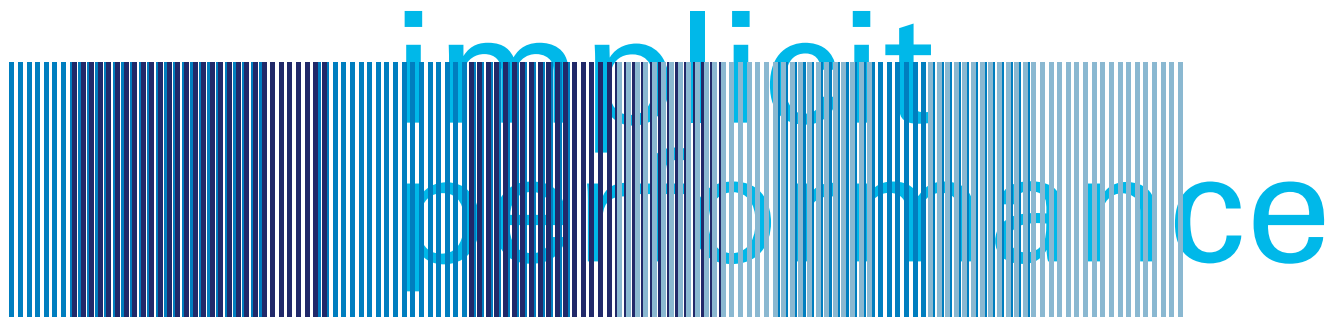
There were a number of general comments which would like to note at the conclusion of the assessment:

We feel the competition brief was very well considered and offered great possibilities for students of architecture in proposing design led solutions through research and examination for new ideas in the application of concrete. We considered that the language of the brief was engaging and supported different design possibilities design ideas that could be submitted within the framework of 'implicit performance'. We welcomed the inclusion of a research element to the competition brief and we were impressed with the level of response to the call for research within the timeframe of what is generally allowed in any competition. We considered this aspect of the brief could be retained and developed further in future competitions.

We were a little disappointed with the number of entries and would ask the competition organisers to seek a wider number of entries for next year perhaps by approaching all schools and/or opening the competition to all students rather than students of any particular year.

Joan McCoy  
Sean Moylan  
David Smith  
Sean Mahon, Chairman

May 2008



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## Italian Jury Report

Meeting of the Italian National Jury for the 3rd Edition of the International Concrete Design Competition "Implicit Performance – Exploring the Hybrid Condition"

On 26 May 2006, at the headquarters of AITEC (Italian Association of Cement Producers) in Rome, the National Jury met to examine the projects submitted for participation in the 3rd Edition of the International Concrete Design Competition with the theme "Implicit Performance – Exploring the Hybrid Condition".

Jury President Prof. Arch. Francesco Cellini opened the session with a salute to all the members present Prof. Arch. Carmen Andriani, Prof. Arch. Marino Folin Prof. Ing. Camillo Nuti, Prof. Arch. Angelo Torricelli and to Architect Maria Teresa Briotti as National Secretary.

Ing. Gabriele Del Mese was unable to be present owing to prior work commitments abroad.

The Jury's proceedings begin with an initial general examination of the 14 projects submitted. An increase in the number of projects submitted over the previous edition is noted but the number is not considered satisfactory, especially in relation to the promotional activities carried out within the University.

One probable cause for the low participation figure may be difficulty on the part of students to reconcile preparation of the Competition with preparations for their University exams.

Following these initial considerations the discussion moves to a detailed examination of all the projects, which results in ample debate.

The members of the Jury observe that the projects submitted are very different from each other and display very different approaches: some propose advanced technological solutions that are costly to realise, others focused on the study of the material concrete but did not arrive at an interesting architectural solution.

The diversity of the contents of the individual projects gives rise to a series of observations on the competition's theme.

The Jury feels that the breadth of the theme "Implicit Performance" disoriented the students more than it guided them in their search for an architectural proposal.

In addition, the vastness of the theme and its theoretical connotation enabled the presentation of projects very different from each other and, therefore, hard to compare.

The members of the Jury agree on the advisability, in the future, of giving the theoretical theme of the Competition a more sharply defined field of application that narrows the range of possible applications.

In other words, they express a positive opinion on the choice of a theoretical theme, usable by the various schools of architecture, but they feel it is advisable to define its field of application.

This can be proposed either at the international or national level.

At the end of the discussion the Jury decides to honour ex aequo the projects below, for the following reasons:

**AZ972** "Layering" awarded for the interesting study of the material, in particular of the stratifications of different concrete mix designs. Each layer is an element with a structural function, with its own mix design (defined "magic formula" in the project), and is cast after a three-hour interval from the preceding one. Hence an exploration of the implicit technological properties of the material.

**MR198** "Reverse Effect" awarded for the application of the "hybrid" concept both to the system and to the material. The project, rich in inventiveness and imagination, envisages a system of floating elements

usable for a city on the water that uses the thrust of the fluid as construction component. In addition, the concept of hybrid for the material consists in proposing the use of a metal-fibre-reinforced concrete.

**EM023** "Noise Environmental Pollution Barrier" awarded for the use of the implicit properties of concrete in the design of a barrier element with a twofold acoustic and environmental function. To develop the acoustic barrier properties, the panel is equipped with cavities that "capture" and neutralise sound waves and therefore noise. For its anti-pollution function, no-fines concrete was used in the mix design in order to increase the surface in contact with the atmosphere and the absorption of CO2.

The Jury also singles out for Honourable Mention the project:

**CG842** "Concrete Garden" Deserving of attention for the freshness and inventiveness of the project: a performance of various recreational spaces made of concrete, use of glass fibre in concretes to achieve transparency. Appreciation for the graphics and the citation from Gianni Rodari, "La fantasia aiuta a risolvere la realtà" (The imagination helps to solve reality).

After the decisions, the envelopes identifying the participants are opened. The winners are:

**AZ972** Paolo BORGHINO – Politecnico di Torino, Facoltà di Architettura

**MR198** Fatma ALIOSMAN, Alper KANYILMAZ, Tolga TUTAR, Ayse BOZKURT – Politecnico di Milano e Lecco, Facoltà di Architettura

**EM023** Eleonora MASSACCESI, Stefano CEROLINI – Università Politecnica delle Marche, Facoltà di Ingegneria Edile e Architettura

And the honourable mention is:

**CG842** Andrea GARZULINO, Elena CIAPPARELLI, Viola BERTINI – Politecnico di Milano Bovisa – Facoltà di Architettura

The cash prize goes to the three winning groups, divided into equal parts, as well as participation in the Master Class and publication of the project in the book ICDC 3rd Edition – Implicit Performance.

The group singled out will see its project published in the book of ICDC 3rd Edition – Implicit Performance.

Rome, 26 May 2008

Minutes recorded by Maria Teresa Briotti– National Secretariat

Minutes approved by the members of the National Jury:

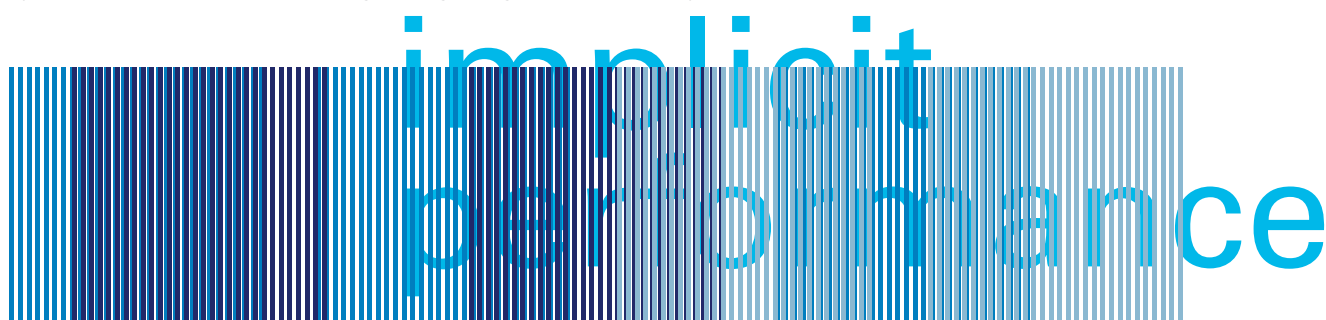
Prof. Arch. Francesco Cellini - President

Prof. Arch. Carmen Andriani

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Prof. Ing. Camillo Nuti

Prof. Arch. Angelo Torricelli



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## Dutch Jury Report

[Dutch jury]

Maurice Nio – architect (chairman), NIO architecten

Alex van de Beld – architect, Onix

Maartje Lammers – architect, 24H architecture

Jan Versteegen – structural engineer, Pieters Bouwtechniek

Caroline Kruit - structural engineer and editor/publisher dax magazine, CCK Media

[Criteria set by the Dutch jury]

Having read the intentions of the theme 'Implicit Performance', the Dutch jury has translated the outlines to more or less measurable criteria. In the assessment of each projects/design the criteria have been discussed in a plenary session.

The criteria in short:

- Level of innovation;
- Does the idea produce a surprising picture? Does this picture change in time and during the lifecycle of the project?;
- Impact of the presentation;
- Implementation and or practical research is appreciated.

In reviewing all entries, the jury was impressed by the standard of innovation by a majority of projects. Quite a few projects explored the boundaries of structural strength, translucency, surface design and composite solutions with unexpected materials.

By examining the students' work, the jury has identified two tendencies that are currently also topic of research in the professional field of architecture. The students are experimenting with designing for the senses (experience of light, colour, touch and sound). The other end of the spectrum shows experiments on 'seasonal' architecture, which involve the use of technology to create rotating facade elements and combine structural and mechanical engineering in designing buildings that will change with the climatic conditions or just to (temporarily) change the appearance of the building.

[Findings of the Dutch jury]

The Dutch jury has selected two winners and three honourable mentions. The jury would like to express that winning a prize in this competition is the recognition of a new approach to designing with concrete and an encouragement to further research. The honourable mentions should be seen as the recognition of a nice idea that explores the possibilities of concrete but needs more research to connect with the practice of design.

[Winner] NL154 – Sense of Scale

Sense of Scale is the somewhat misleading title - according to the jury - of a project that has multiple qualities and fits most of the criteria. The project explores the aesthetic, thermal and structural qualities of ultra high strength concrete (hsc) and the architectural impact of working with elements with a relatively large scale spongy texture. It is the extensive research shown in the presentation, the search for an integrated or combined quality of building technology, physics and architecture, that appeals to the jury. Although the apparition of the chosen texture is not new (a.o. Koolhaas has worked with similar

elements), this project is more than 'just a pretty element' because of the research in the field of energy saving solutions and integrated design. The jury speaks of a "brave experiment with some rough edges", has small doubts about the sustainability of the plastic globules but is overall enthusiastic about the way the project is presented. Less but stronger material, more surface thus better accumulation of energy and a strong architectural presence combined in one element: a true winner!

[Winner] TU000 – Sakura Concrete

Sakura Concrete plays with the senses of the spectator. The jury appreciates the projects as "pure poetry". The combination of concrete with fragile living material (like the orchids that were used in the experiment) brings "soul" to the material and the elements. The contrast of fragility and structural strength is expected to enforce the character of the elements in time. According to the jury this projects meets all the criteria set in the theme 'Implicit Performance'. Sakura Concrete is emotion, is sustainable in its own way and an inspiration for other designers.

[Honourable mention] Rotating Concrete

Rotating Concrete generates different appearances of the façade with floor high vertical rotating wings. The system also anticipates on changing climatic requirements of the façade. Using concrete creates a "dramatic" complexity in the structural system, although ultra high strength concrete at the rotation points will ensure a long lasting performance. By stiffening a select number of joints the construction as a whole will be stable and even applicable for multistory buildings. The jury appreciates the design but stretches that it is also the weakness of the project: the characteristic appearance will withhold other architects to use the structural/mechanical principal. To justify the amount of research into the structural and mechanical conditions of the system, the jury emphasizes the need to research the system on its architectural merits.

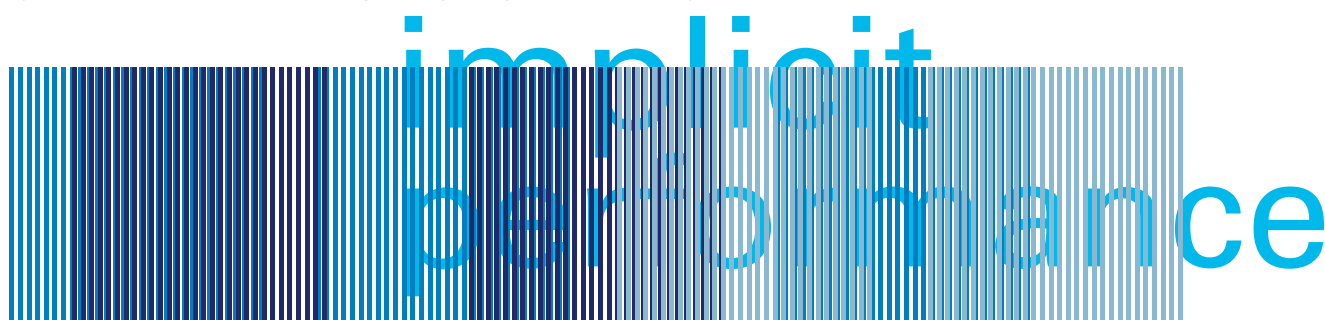
[Honourable mention] SC794 – Singing Concrete

Singing Concrete uses the material to play the senses. The jury welcomes sound as an extra tool to create architecture. The concept of singing stones is not new, but the scale of this expressive icon in concrete is. The design as shown in the presentation is not strong, the quality too univocal. The danger of showing attractive existing Klanksteiner in the presentation, only emphasizes the shortcoming of the plan. Sound as an extra dimension in urban and architectural design is worth additional research.

[Honourable mention] GR275 – Moiré

Moiré is not the only project in this competition that shows the architectural impact of perforated or translucent planes or walls made of ultra high strength concrete. Moiré stands out because of the shown contrast between the fragile looking concrete and its structural strength. This antagonism has enormous potential in architectonic respect. In spite of the charming fragile construction elements in daring combination with the heavily dimensioned roof plate, the layout of the pavilion does not appeal at all. For this reason Moiré is not a winner. The concept certainly deserves further research.





exploring the hybrid condition

## Norwegian and Swedish Jury Report

The Concrete Design Competition has run during the 2007-2008 academic year in nine European countries under the theme of Implicit Performance.

Students in Sweden and Norway have participated in the competition with a common jury assessment. The last day for submitting entries was 20 May 2008.

A total of 18 entries were received from 4 different colleges. A total of 22 students participated.

The jury consisted of

- 1) Architect Hans Bruun Nissen, Aalborg Portland, Aalborg (Chairman of the Jury)
- 2) Professor, Interior Architect Jonas Bohlin, Konstfack University of Arts, Crafts and Design, Stockholm
- 3) Architect, Associate Professor Torben Dahl, Royal Danish Academy of Fine Arts, School of Architecture, Copenhagen
- 4) Architect Geir Johnsen, N1 Arkitekter DA, Oslo
- 5) Professor, Architect Bente Kleven, LPO Arkitektur & Design AS, Oslo
- 6) Professor Johan Silfwerbrand, Swedish Cement and Concrete Research Institute, Stockholm

Secretary: Anita Stenler, Cements AB, Stockholm

The jury members received the entries submitted for the competition in digital form a couple of days before the jury session, which took place on 28-29 May 2008.

The first day was devoted to a joint study of the entries, with a lively exchange of comments and viewpoints. From a rough evaluation a small number of favourites emerged. The next day these selected favourites were discussed again, including motivations and more formal argumentation. Two winners of the first prize were named, and after a certain amount of discussion a third prize recipient and a recipient of a special mention were also named.

### **General comments about the entries to the competition:**

A number of the entries exhibit good potential for continued development and serve to inspire further studies of, among other things, applicability and manufacturing of the products.

Without exception, the presentations of the entries were elegant.

However, the presentations often lacked an explanation of how the entrant had envisioned to produce the proposed items. The jury would have wanted more details than illustrations.

The jury had expected that the theme, involving possibilities for connections between concrete and other materials, would function as a gateway for releasing creative forces. But the interpretation of the hybrid theme seemed in many cases to rather have put a lid on the creativity. A number of the students submitting

entries seemed to have backed themselves into a corner by combining materials but not developing form or application.

The jury did not find a high degree of novelty in the entries at large.

In its evaluations, the jury took into consideration novelty, form and expression along with the application of the product/material – in use or development – and the ability of the entry to take advantage of the properties of the concrete material. The jury looked favourably upon entries that showed manufacturing methods.

The jury decided to award one first prize that was divided between two entries of equal merit and a third prize. Another entry was given a special mention.

#### **Winners:**

##### **Shared first prize and EUR 1,500 for Motto SZ595**

The entry entitled Urgent performance depicts concepts involving concrete structures that are assembled from form-mats, intended for use as emergency dwellings or refugee camps anywhere around the globe. The jury is highly sceptical of the concept of emergency dwellings of this type, however it does wish to recognise the entry's spatial and experimental value. The entry shows a great deal of experimental, material and production interest, plus it serves as inspiration for possibilities of continued development and research.

It provides interesting possibilities for fashioning a dwelling individually, and makes for exciting buildings without right angles. The idea of filling the form with sand and cement in advance would make the "mats" far too heavy to handle, plus problems would arise with the mixing. It would be more realistic to fill the flexible form in situ with self-compacting concrete.

Further work is encouraged on testing out the form material, the supporting structures during the pouring stage and the handling.

##### **Shared first prize and EUR 1,500 for Motto SO321**

The entry entitled How did it come to be and how will it change in the future shows interesting possibilities for creating reliefs and nuances in concrete surfaces and concepts involving variability. Even though the jury has seen similar solutions before, this entry shows imaginative possibilities to use concrete differently in public spaces, and to achieve changes – intentional or unintentional – over time. The jury wishes to call particular attention to the importance of considering the environmental aspects when objects, of for example plastic, are embedded and possibly burnt away.

##### **Third prize and EUR 1000 for Motto TV531**

The entry entitled Concrete Tex distinguishes itself in a visionary way by showing a great potential for using concrete aesthetically by using hybrid form material. It shows possibilities that are still greater than what appears directly in the material submitted with the entry. The jury wishes to draw attention to the following as possibilities for further work with the concept:

- Using the textile material solely as a disposable form with the possibility of providing individualised and powerful expressions. The textile material should in fact be removed after the concrete has dried, so that the natural surfaces of the concrete will be exposed.
- There is a great potential in working with a construction component such as a "hybrid form". A combination of a remaining thin concrete form, which may be mass produced like a building block, and a flexible disposable textile at the front of the building block, in order to provide possibilities for individuality and creativity.
- A substantial amount of development work remains in order to find the right type of textile that is able to accommodate the desires for creative expression as well as being able to withstand the pressure from the concrete when it is liquid. Full-scale testing is absolutely necessary.

**Special mention for Motto MS225**

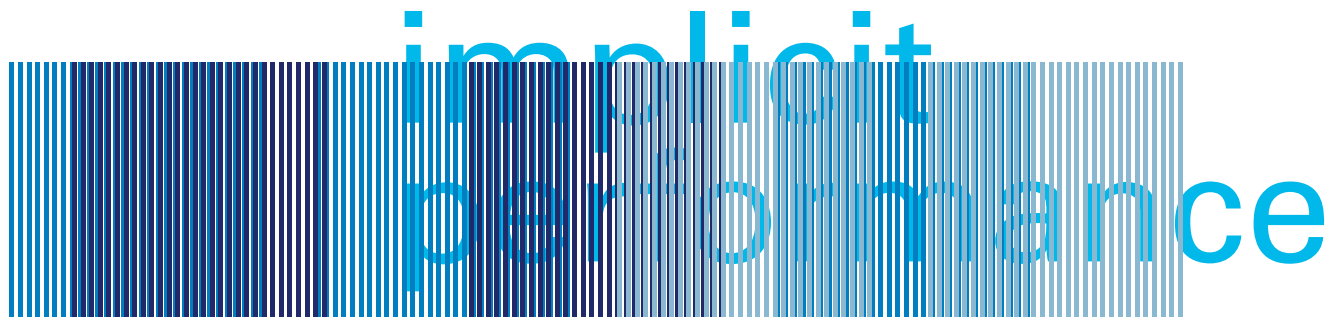
The entry entitled Möbius Stage stands out with a striking form, which the jury would like to see developed in its design. Its connection to the theme of the competition is thought to be weak, however. The jury rates the ambition to work at full scale highly, but the presentation lacks an explanation of how the mould is produced and how the sculpture is casted.

The entrants with these four entries will be invited to participate in an international Master Class, which will take place in Belgium in August.

Stockholm, 4 June 2008

Hans Bruun Nissen

Chairman of the Jury for the Concrete Design Competition on Implicit Performance in Norway and Sweden



exploring the hybrid condition

## Turkish Jury Report

**Place of the Session:** Istanbul Bilgi University, santralistanbul Campus, Istanbul

**Date of the Session:** May 21st, 2008

### Jury Members:

Ihsan Bilgin (Chairman)  
Deniz Guner  
Sebnem Yalinay Cinici  
Nevzat Sayin  
Atilla Yucel

### TCMA Representatives:

Handan Kiritmay  
Irem Erdogan

### Introduction:

Participants needed to do research and design in order to achieve the goal of this year's Concrete Design Competition. They needed to search for hints on "Implicit Performance"s through design and research. They were asked to make an observation on concrete to see how it can be used with other related sources and how to push the limits. Keeping in mind the fact that concrete is not the only player in the game but the basic element, the participants were asked to create new implementations and new building materials.

The Jury considered the performance as investigating different materials and techniques to see if they have the possibility to come together and follow hybrid potentials. They focused on how the participants built holistic designs from pieces. The jury also analyzed how the animated and active elements were used; whether holistic or in pieces. Therefore, the integration and collective use of materials, design instruments, techniques, the communication styles were the evaluation criteria for the jury.

There were 30 projects which had different designs and stimulating ideas in 2007-2008 Concrete Design Competition. Competitors were students from architecture, engineering, design departments of the universities and also from the related faculties.

## **Evaluation:**

### **1st Elimination**

Instead of enlarging the material properties of concrete and searching new opportunities, the projects which were more concerned with the design of an object, space or structure were eliminated in the first elimination by the jury.

TF326  
RC208  
TR011  
MO213  
SE404  
XX515  
GA454  
ZZ888  
GG022  
TM753  
FM038  
KS038  
UR678  
CS324  
EA245  
AI149  
EK970  
NT004

The project with the title of NN116 was eliminated since the jury couldn't see any relevance in the design with concrete material.

### **2nd Elimination**

The jury was impressed by the new material opportunities that were suggested by the selected projects in the first tour. But, due to the limited production potentials of these opportunities for new hybridisms, the projects titled CD515, SO274, MD449, DC702, MC689, and DT001 were eliminated in the second tour.

### **3rd Elimination**

The two projects titled MF157 and TB721 that passed the second elimination tour, were attracted the attention of the jury by transforming concrete into interactive surfaces and suggesting a new hybridism. In the project titled TB721, a concrete wall was transformed into an interactive surface by placing waste materials such as plastic bottles, aluminum box straps, plastic rim stoppers on the concrete wall. The project titled MF157 placed a LED lighting product inside the concrete wall in order to transform the surface into a digital screen. Both of these projects were appreciated by the jury. But they were eliminated in the third tour since the jury decided that the projects brought together different materials synthetically and they couldn't use the opportunities of concrete material sufficiently.

MF157  
TB721

## **Awarded Group**

Three projects titled K0911, GO427 and EH307 were found eligible to be awarded by the jury since they suggested different systems which are adaptable to different positions and different hybridisms rather than suggesting a singular product, space or structure; and questioned the potentials of concrete materials.

KO911 titled project focused on the properties of concrete material and was appreciated by the jury with its idea of “reactional concrete”: transforming its appearance in different geographies and seasons, and the wall interacting with human acts.

The EN307 titled project suggested to combine the idea of growing plants on soiled roofs with concrete material. The project suggests to create “concrete which enables plant growth” by adding hydro-culture into the aggregate of concrete. The jury was impressed by the idea of concrete “leafing out” by containing granules that are used in plant cultivation without soil. Furthermore, the idea of this new hybridism transforming concrete into a porous structure in time attracted the attention of the jury.

While lightening concrete, aiming to make it more durable from a structural point of view, the project titled GO427 suggested that concrete could be lighter, more durable, and floatable by injecting small air calicles into it. This project “bringing gas together with concrete” has earned jury’s praise for approaching performance through the perspective of resistance and hybridism.

KO911  
GO427  
EH307