

## Concrete Design Competition – CDC 10 – jury report – dd. 16<sup>th</sup> of June 2022

The jury gathered on Tuesday 16<sup>th</sup> of June at the offices of FEBELCEM for the evaluation of the 11 entries for the tenth cycle of the Concrete Design Competition, representing 18 students from 6 different architecture schools in Belgium.

The jury awarded the prizes to projects that were inspired by the theme “REIMAGINE”.

First Prize: **Water Gamer** Louise Beauvois  
Faculté d’Architecture La Cambre-Horta

Louise Beauvois designed a thin concrete veil that floats over a small square at the crossing of multiple streets. The structure is based on the HiLo research from the ETH Zürich. The new method of formwork allows the creation of a very thin double curved roof of carbon fiber reinforced concrete. The innovation makes it possible to construct complex forms while reducing waste and minimizing resource consumption. The jury appreciated also how the structure transforms a non-place into a place, the structure itself becomes a place. The urban presence makes something real that may be abstract.

### WATER GAMER

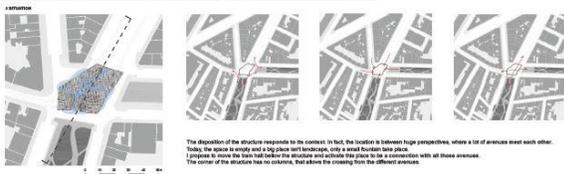
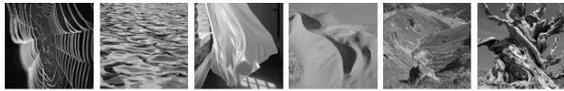
surface / tense / bending

Porte du Rivage // 1000 BRUSSELS

50°51'22.17"N / 4°20'48.37"E

CONCRETE DESIGN COMPETITION 2021/2022

18012



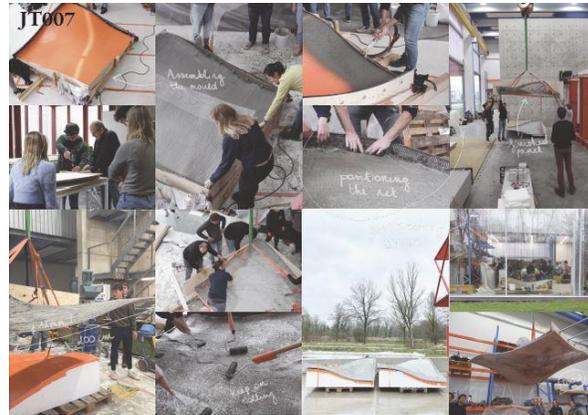
“There were no limits to the shape of concrete. Structures had to be before the designer. An astonishingly new one. It is astonishing that it has not been done in such a form before. It is astonishing that the great quality of concrete is being used in the lightest and most elegant way possible in the world and in the past.”

\* Click on the image above to download the PDF in high resolution

Second Prize: **New UHPRC Wave** Isabelle Borgers – Caro Geerts – An-Sofie Suffeleers  
UHasselt

The students from UHasselt experimented with UHPC (Ultra High Performance Concrete). Less materials are needed for the same span that can be made with concrete, thus, the structural parts manufactured with UHPC can be dimensioned much thinner. The students designed a canopy consisting of four curved two-by-two-meter squares with a thickness of a mere 12mm. The four UHPRC elements are attached to a steel column with a diameter of 150mm. The jury was charmed by the fact that the students engaged in a 1 to 1 realization of the structure. By using new technologies, they reduce the volume of concrete being used.

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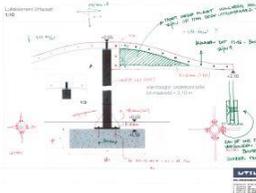


### NEW UHPRC WAVE

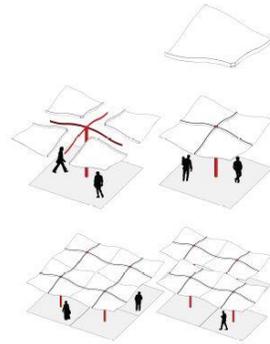
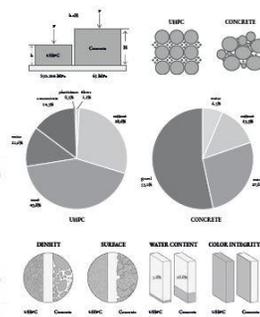
Our project "New UHPRC-wave" is an experiment, looking for an intersection between design and the use of an innovative material. This material, UHPC (Ultra High Performance Concrete) uses smaller aggregates than regular concrete, thus achieving optimal packing density. UHPC also has an increased compressive strength, using fibers as reinforcement. A low water binder factor combined with them makes that UHPC has promising properties. This makes the material designed to be used in concrete in terms of making and sustainability.

With the experimental data, we optimized on the void relevance of UHPC. Less raw materials are needed for the same span that can be made with concrete. Thus, the structural parts manufactured with UHPC can be dimensioned much thinner.

Our design includes a canopy consisting of four elements. These elements have a dimension of 2000mmx2000mmx12mm. The canopy can be built in a modular way. It is possible to use up four elements, but series can also be made, as shown in the image above. In our design the four elements are attached to a steel column with a diameter of 150mm. The elements can be completely prefabricated. After this, they can easily be transported and mounted onto place.



#### UHPC VS CONCRETE

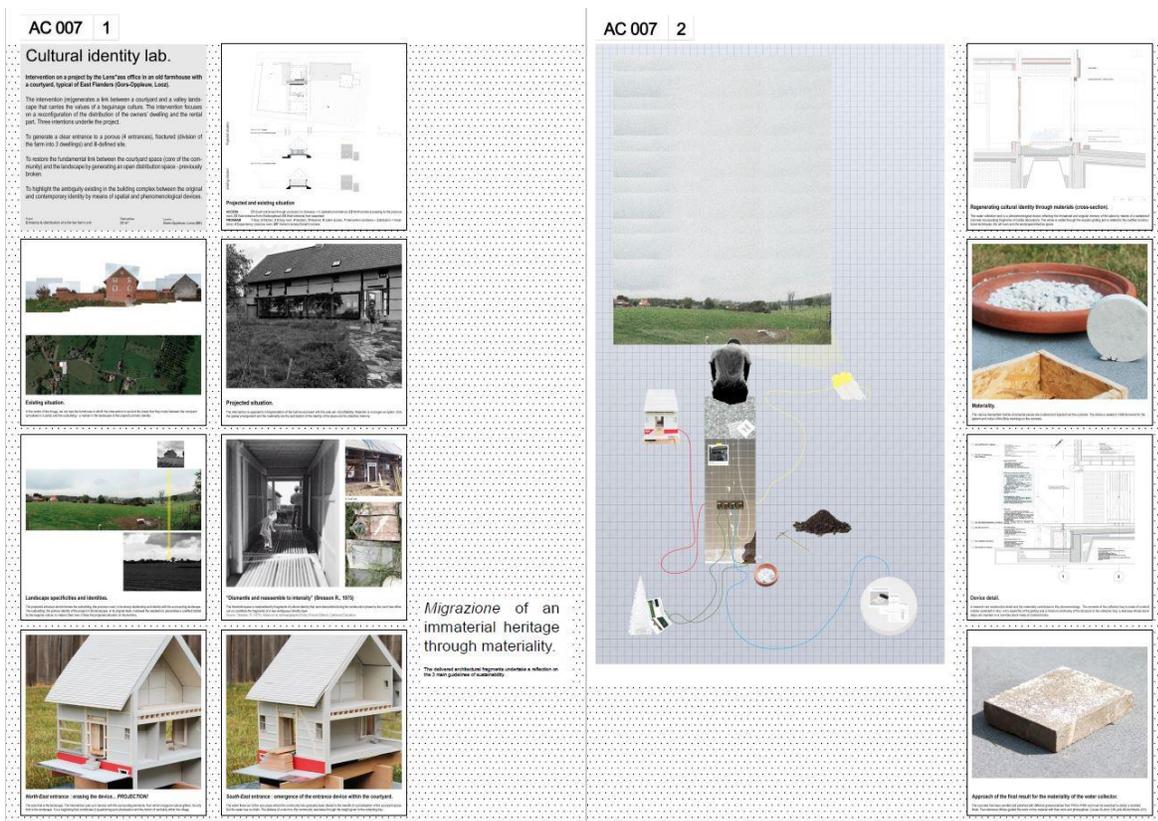


\* Click on the image above to download the PDF in high resolution

Third Prize: **Cultural Identity lab.** Alexander Collette

Uliège

Alexander Collette proposed an intervention on a project by the Lens°ass office in an old farmhouse with a courtyard, typical of East-Flanders. Existing materials are crushed and put in the concrete mix. The various dismantled marble ornamental pieces are crushed and those are used to make the water collector. Concrete is used here as an old material that is adaptable to many uses. The jury appreciates that is not only about structure but also about surfaces that define a space. Recycling is not only about materials but also about keeping the history of a place.

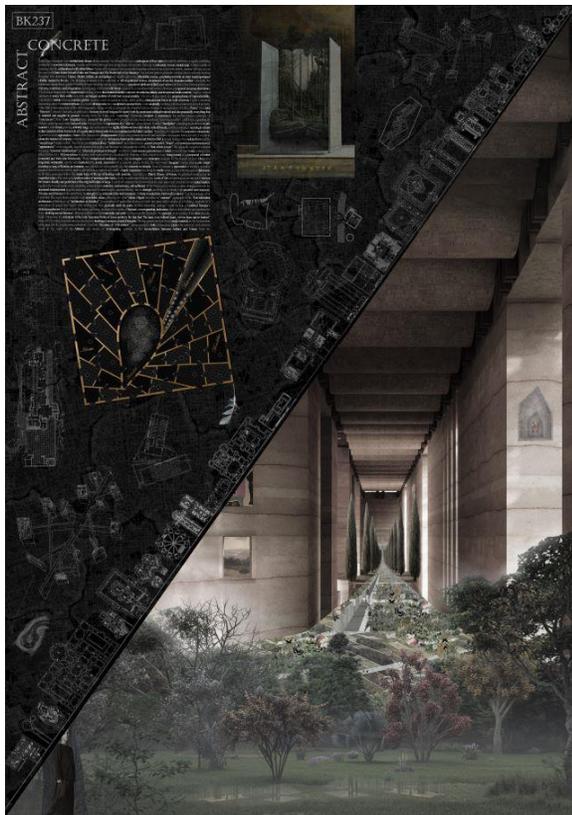


\* Click on the image above to download the PDF in high resolution

Honourable mention: **Abstract Concrete** Bogdan Stoicescu

Université catholique de Louvain – LOCI

Bogdan Stoicescu described in words and images his “strangely vivid architectonic dream about concrete”. Combining terminology and floorplans it culminates into a very personal way of thinking about a material, not just how it would be used to construct. The jury acknowledged this personal viewpoint as he sees concrete as something poetic.



\* Click on the image above to download the PDF in high resolution

Honourable mention: **Paperdoll Towers** Eline Van Uytsel – Nathan Kolenberg  
 KULeuven

Eline Van Uytsel and Nathan Kolenberg designed a tower as part of the Oude Dokken in Ghent. Their project is a prototype for Paper Doll Tower. It consists of a permanent core and light, interchangeable walls, just like a paper doll, which can change its clothes to adapt to the owner's taste. This way of designing an 'intelligent ruin', where the facades aren't part of the load-bearing structures, divides the building's elements into different life cycles that can proceed autonomously. The concrete spine is the core of the project, literally and figuratively, because it is designed to last over a century. This way concrete can be used sustainably by playing into its strengths: durability and permanence. The jury appreciated how endurance and flexibility are combined. It is interesting how materials, in this case concrete, can create new typologies based on how it is fabricated.



\* Click on the image above to download the PDF in high resolution

### **About the Belgian Jury:**

#### **Adrien Verschuere**

BAUKUNST

jury chair

Studies in Architecture at ISA St-Luc Tournai, Belgium and at the École Polytechnique Fédérale de Lausanne, Switzerland (diploma with Prof. E. Zenghelis in 1999). He was a design architect at Herzog & de Meuron, Basel between 2000 and 2003 and at the Office for Metropolitan Architecture - Rem Koolhaas, Rotterdam until 2001. Adrien Verschuere is the co-founder of the architecture firm Made in, Geneva, Switzerland.

In 2010, he established BAUKUNST in Brussels and from 2017 in Lausanne. In 2019, BAUKUNST presented its first solo show at Bozar (Brussels), accompanied by a monograph publication (Ed. by Koenig Books) and at the Solo Galerie (Paris) in 2020.

Adrien Verschuere is regularly invited as guest critic or lecturer in various institutions, among others : the FAUP Porto, IRGE Universität Stuttgart, Berlage Institute Rotterdam, USI Accademia di Architettura Mendrisio, Kyoto Design Lab, and ETH Zürich.

From 2019, Adrien Verschuere is Visiting Professor at the École Polytechnique Fédérale de Lausanne, Switzerland.

#### **Klaas De Rycke**

Bollinger+Grohmann

Klaas De Rycke is a Belgian civil engineer, and architect. He is a senior lecturer at the Architecture School of Versailles (Ensa-V, France) where he is also a researcher as part of the LEAV lab. Since 2017, Klaas is also active as a Senior Teaching Fellow and researcher at the Bartlett School of Architecture in London. Klaas De Rycke dedicates his time and energy to the academic world in parallel with his professional activity.

Klaas joined Bollinger+Grohmann in 2003. The world-known company was originally founded in Frankfurt by the German engineers Prof. Dr Klaus Bollinger and Prof. Ing.

Manfred Grohmann who share the same passion for architectural engineering. As a partner at Bollinger+Grohmann Holding AG, Klaas heads the offices in Paris and Brussels that are specialized in complex structures, facade and parametric design. He is solicited to work on morphologically complex projects.

Klaas' fields of expertise are the structural and manufacturing optimizations through mathematical and complex numerical approaches. He is working on the use and implication on design of machine learning in numerical calculations coupled with the use and im- plication of genetic algorithms in structural and architectural approaches and their carbon impact. He is also a specialist on complex façade engineering. He gathered and used his expertise in multiple international projects.

Within his educational activities, he aims to share his rich professional experiences with his students. Klaas initiated multiple workshops throughout the world. He develops projects with students and

Bollinger+Grohmann collaborators by exploiting parametrical designs, digital fabrications and the use of new technologies and building materials.

**Stefanie Everaert** Doorzon interieur architecten

Doorzon interior architecten was founded in 2005 by Stefanie Everaert and Caroline Lateur.

Their assignments were initially mainly private, ranging from apartments and renovations to smaller interventions such as specific made-to-measure furniture. Over the past 17 years, however, their field of work has expanded further to include public and international projects, numerous prestigious competition designs, scenographies and exhibitions.

Since 2016 they both work as lecturers at KU Leuven (Faculty of Architecture, Campus Sint-Lucas Ghent) where, together with Prof. Dr. Ir.-Arch. Fredie Floré, the master's thesis studio 'Vraagstukken uit de praktijk'.

At the invitation of architecten devyldervincktaillieu, they took part in various 'Open Calls' organised by the Vlaams Bouwmeester.

The Brussels architectural firm 51n4e invited them for two projects in Tirana (ALB), of which the Centre for Openness and Dialogue was inaugurated in 2015 by German Chancellor Angela Merkel and Albanian Prime Minister Edi Rama.

In 2016 Doorzon interieur architecten, together with architecten devyldervincktaillieu and Filip Dujardin, were selected by the VAI for the 15th Venice Biennale of Architecture. Under the name of BRAVOURE, they curated an exhibition on the theme of craftsmanship, each time showing a remarkable detail of 12 different full-scale Belgian architectural projects in the pavilion.

Commissioned by the VAI, a publication on this exhibition was also published (De Vylder, J., Vinck, I., Taillieu, J., Everaert, S., Lateur, C., & Dujardin, F. (2016). *Bravoure scarcity beauty*. Antwerp: Christophe Grafe, dir. Flanders Architecture Institute.)

Partly because of and thanks to these multidisciplinary and international collaborations, the importance and role of the interior architect was investigated and deepened in a broad, socially relevant context. This is one of the ambitions that Doorzon wishes to further propagate, in order to give a face to the discipline of the interior architect within Flanders and beyond.

**Aurélie HACHEZ** AHA | Aurélie Hachez Architecte

Aurélie HACHEZ (1983) is an architect based in Brussels. She graduated from ISACF La Cambre in 2008 and founded AHA, her own architectural office in April 2012. Since then, her practice has focused on designing projects of different scales including furniture design, interior renovation or architecture and urban planning projects. She was guest teacher at TUDelft for the chair Urban Architecture between 2019 and 2021.

### **Philippe Vander Maren**

Philippe Vander Maren graduated as an architectural engineer from UCL University in 1995. After working with Pierre Hebbelinck and Charles Vandenhove, he created his own office in 2002 with Mireille Weerts. He is currently teaching at UMons and ULiège and is also co-founder of the Jeanne and Charles Vandenhove Foundation.

A selection of the work he has done (in collaboration with the artist Richard Venlet): renovation of the former presbytery of Saint Gertrude (2002-2008), chapel, meditation space and mortuary of the AZGroeninge hospital (2008-2010), transformation of the Augustinian convent in Bouge (2009-2011), transformation of the Cointreau distillery into an artist's studio and home (2011-2014), transformation of a house in Rhode-Sainte-Genèse (2012-2017), house in Grez Doiceau (2011-2020).

The work of his office has been recognised by a nomination for the Belgian Architecture Prize (2015), nomination for the European Prize for Contemporary Architecture Mies van der Rohe (2009), Prize of the Academy of Fine Arts in 2008, Prize of the Province of Flemish Brabant in 2009.