

A L I C E

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o v e r f l o w

EPFL / ENAC / IA / ALICE
atelier de la conception de l'espace
spring semester 2008
dieter dietz, olivier ottevaere, daniel pokora, isabella pasqualini, katia ritz, marc schmit

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the designer within

One of the key ideas underlying ALICE's approach to teaching design is a constant discourse between a conceptual framework of an architectural idea and its translation into an actual project. While projects are usually developed with typical architectural drawings and models to represent a given proposal, we are presently exploring the potential of expanding the project scale into a one-to-one condition. The intention is that the structural constraints present at this scale as well as the potential physical and spatial impact will encourage synthetic thinking and a holistic approach to design issues.

In the academic year 2007/2008 a series of explorations of gravity formed the beginning of the semester. The students first produced a physical construct declaring gravity at work. This initial artifact was then subjected to a process of analysis, reevaluation and reinterpretation in 3-D software, physical models and architectural drawings, and was finally transformed into a proposal for a site-interactive installation or 'pavilion' for the London Festival of Architecture held in June 2008. At the end of the first semester, these proposals were entered in an internal, juried competition, resulting in a team of twelve students who would further develop the design and bring it to completion.

To realize a construction of a pavilion or an installation in a remote city with a second year design class is an experiment. The basic idea behind it was to expose students to processes in architectural production, from conception, to planning, to realization, to the ultimate removal of the architectural artifact—thus, the full life cycle of an object.

At the same time, such a project calls into question the position and the viewpoint of the designer. Here, the architect is not just a creator, he is also a craftsman, a producer, an engineer, a manager, etc. Thus the designer is not only acting from without or above—from a top-view position or a bird's eye perspective so to speak—but also from within. The employment of digital and physical tools, in combination with the actual building of a one-to-one structure, presents a framework of multiple reference frames for the maker of the design, while at the same time transgressing these frames. This altered position of the designer-architect implies understanding architectural design as an emergent process.

london festival of architecture

The London Festival of Architecture is a biannual event, which propagates the city as a stage for architectural and social interventions. The National Architecture Student Festival forms part of the biennale and proposes a platform for schools to present projects in the very heart of the City of London. For further information refer to www.lfa2008.org

overflow

In the spring term 2008 the ALICE pavilion team designed Overflow as a large-scale architectural artifact interacting with the tidal movements at the Thames River.

Overflow has been erected on the Southwark Walkway in front of Tate Modern. It has been assembled on June 18th and 19th and staged as an ephemeral event on June 20th/22nd.

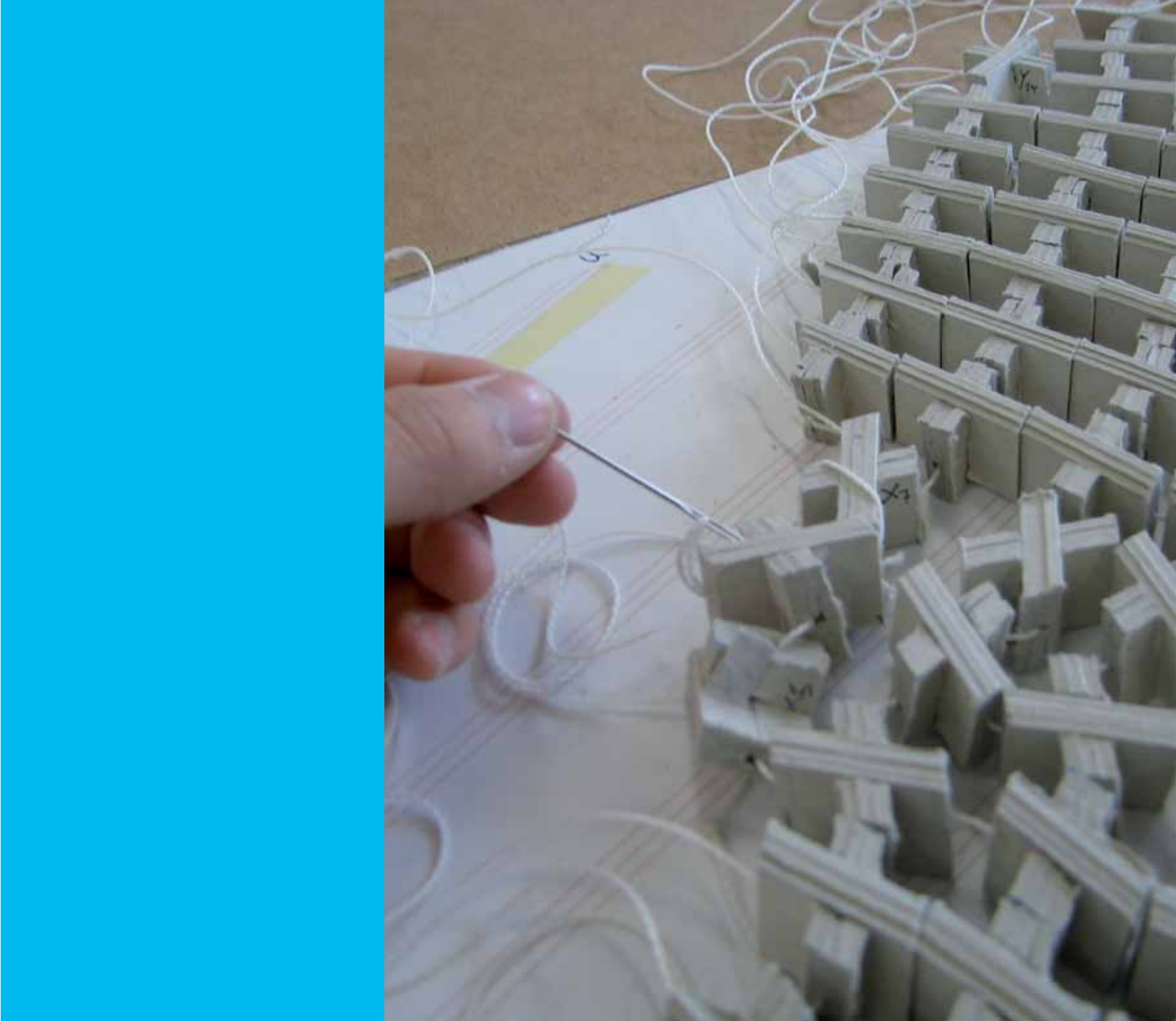
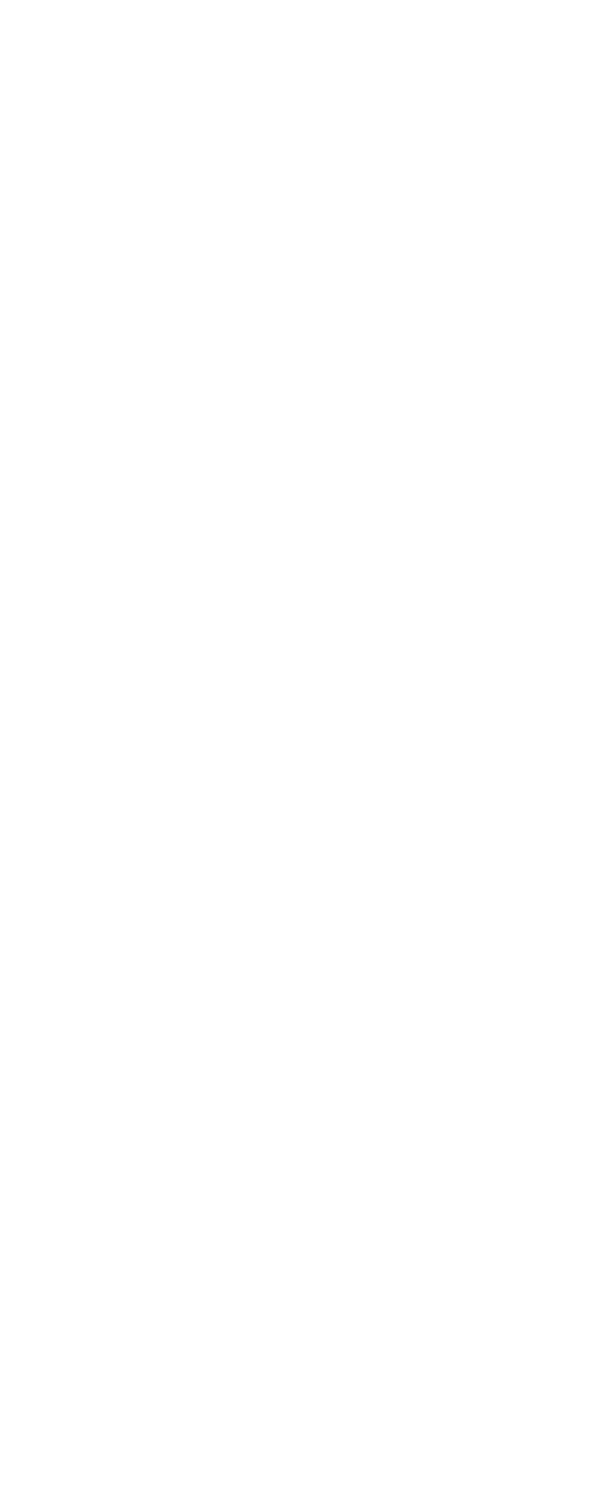
Overflow was awarded the prize for 'Signposting' and won first prize as the festival's 'Best Overall Project' by on the final jury of the NASF.

In fall 2008 ALICE presented a documentation and an installation on Overflow at the Venice Architecture Biennale 2008 as part of the exhibition in the Swiss Pavilion.

making of

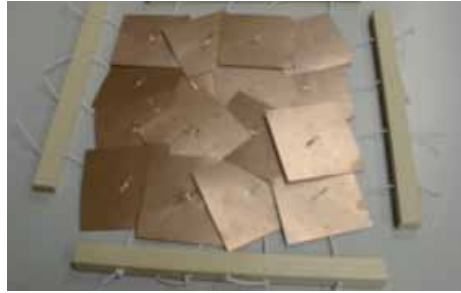
Overflow was originally designed for Tower Bridge Plaza. This site was strategically chosen in order to investigate how a natural force such as the tidal movement occurring in the Thames could be amplified and extended over the land in the form of a spatial screen continuously transforming the perception of the iconic London Sky-line and its presence from the plaza.

The development of the final project was accompanied by a large number of study models, structural tests, mock-ups, and a field trip to the site in London.

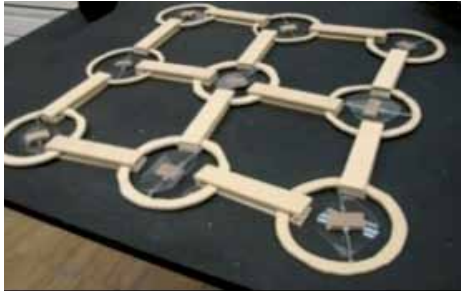




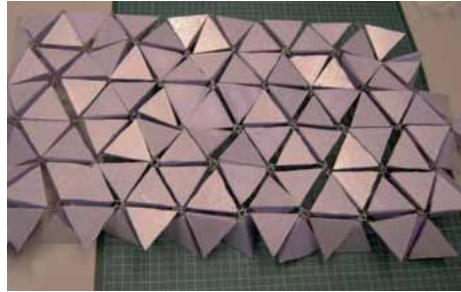
1a



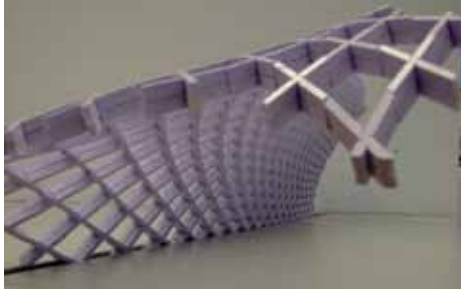
1b



1c



1d



2a



2b

1a-1b Testing material and structural systems
2a,b Study models



Building study models at EPFL



1a



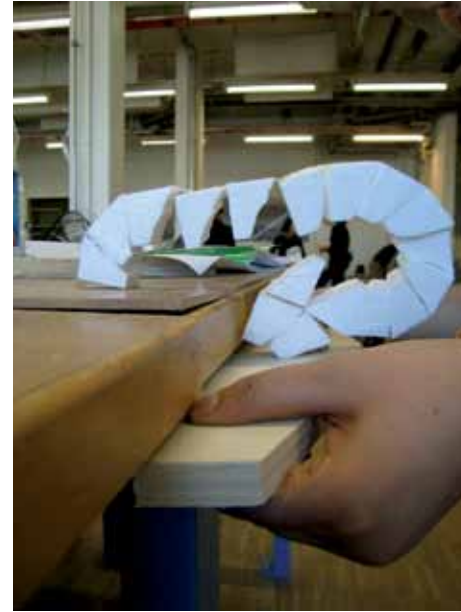
2a



1b



2b



1



2



1c



2c



1d



2d



3



4

1a-d Test of a structural system
2a-d Simulation of the tidal movement and its impact on a structural system

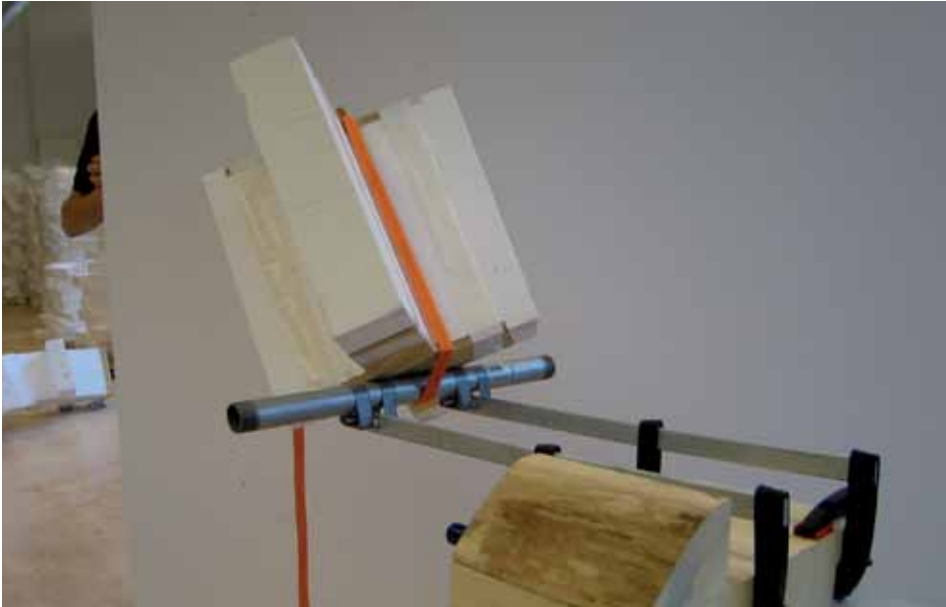
1-4 Test of structural systems



Testing a first styrofoam mock-up: moving with the tide in the river Thames at the embankment of Tower Bridge Plaza in London, March 26th, 2008



1



1



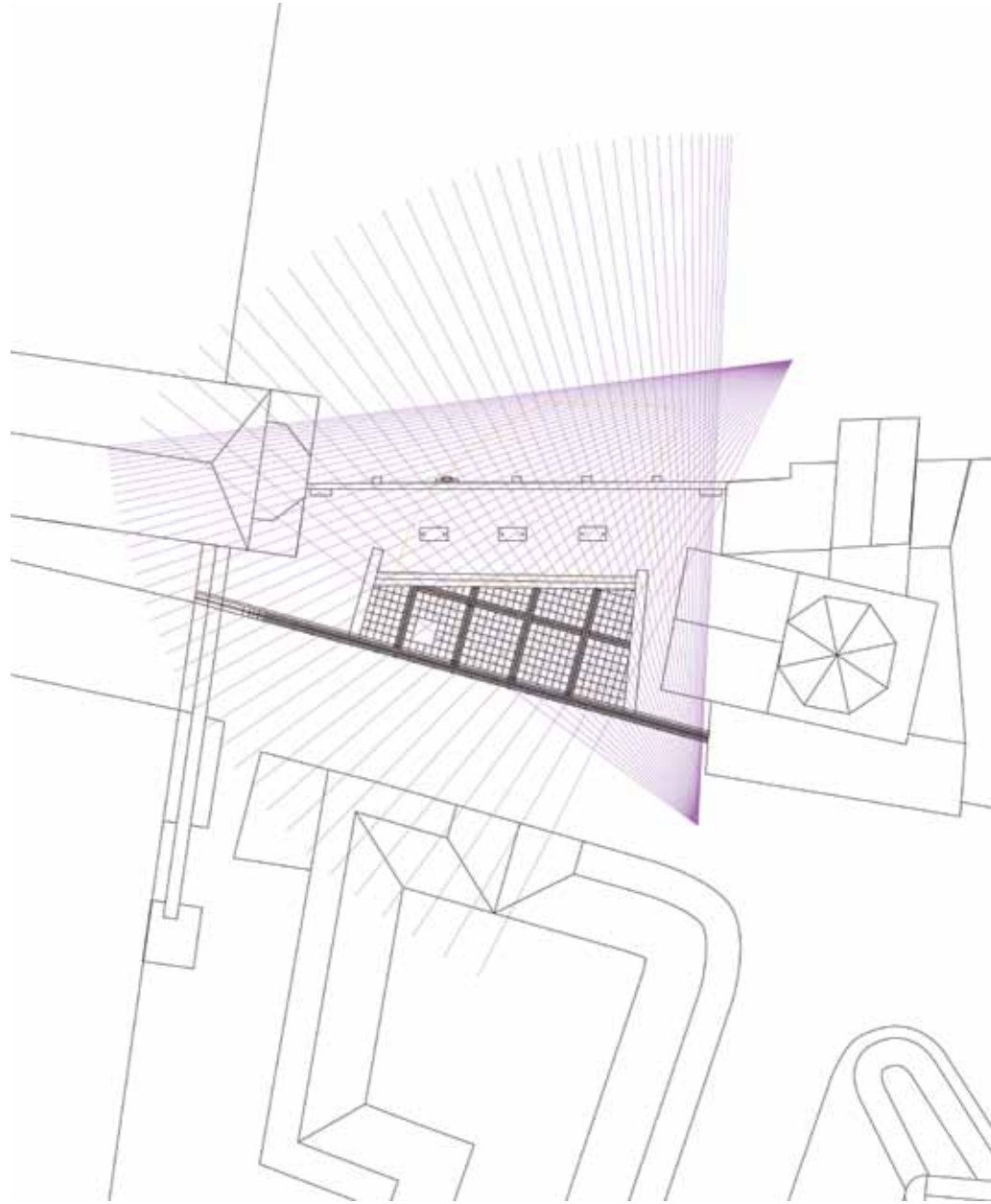
2

1, 2 Testing a first styrofoam mock-up at Tower Bridge Plaza in London



2

1, 2 Mock-up 1:1

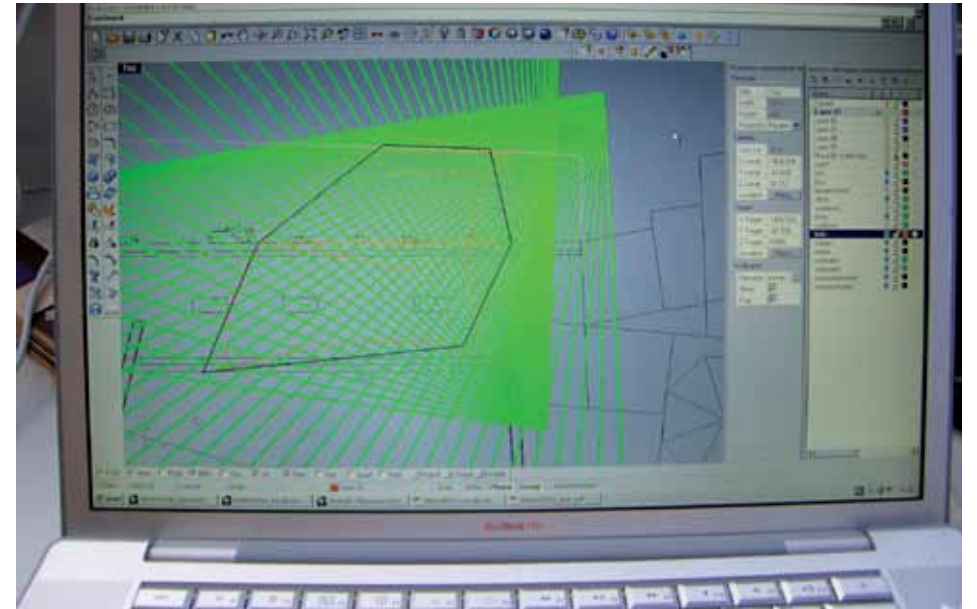


The structure is based on the idea of a radial grid.

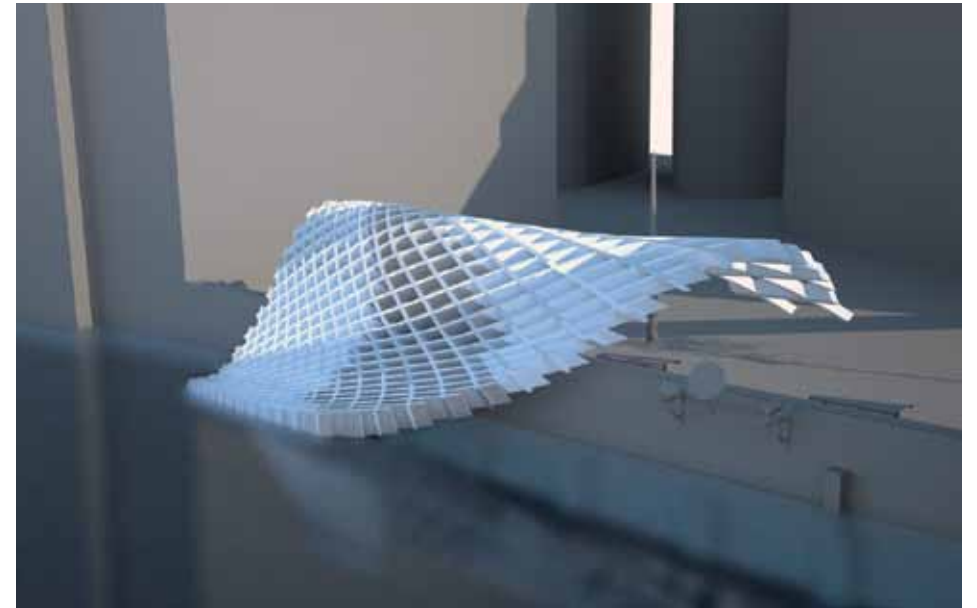
The geometry implies constantly changing viewpoints, as well as porosity in gradient conditions and in motion, caused by the impact of the tidal forces. It is specifically designed for passerby movements.

The porosity of the structure will enhance the awareness of the view filtered from behind, implementing a direct awareness of the urban setting.

Conceptuel drawing, Ideas of porosity, light and changing perception were introduced into the installation.

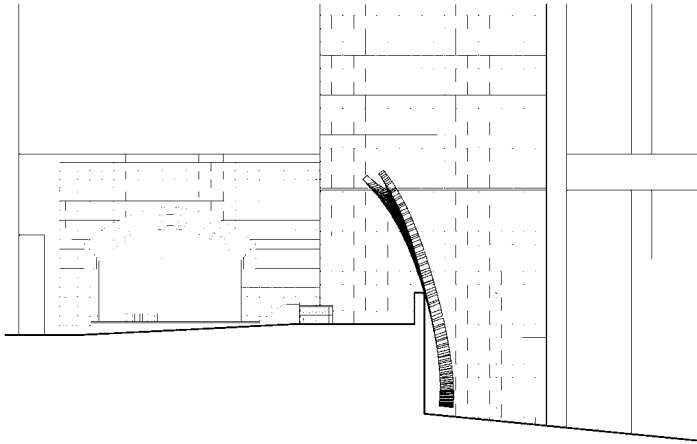


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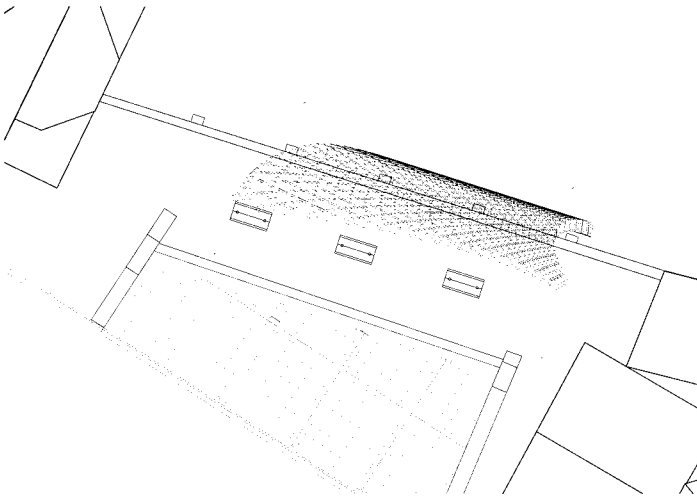


2

- 1 3D CAD drawing
- 2 Rendering of tidal installation

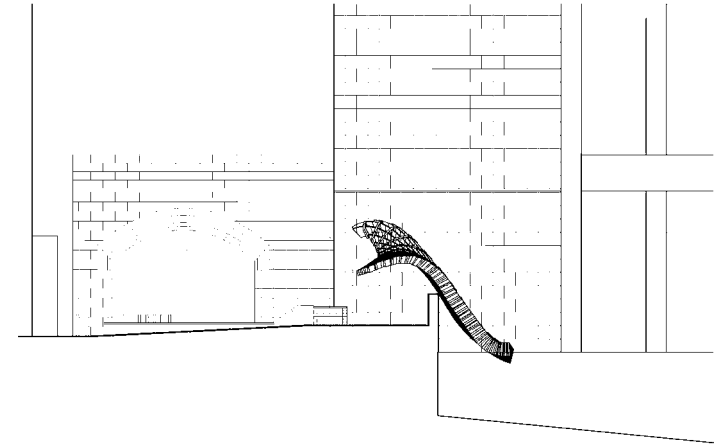


1a

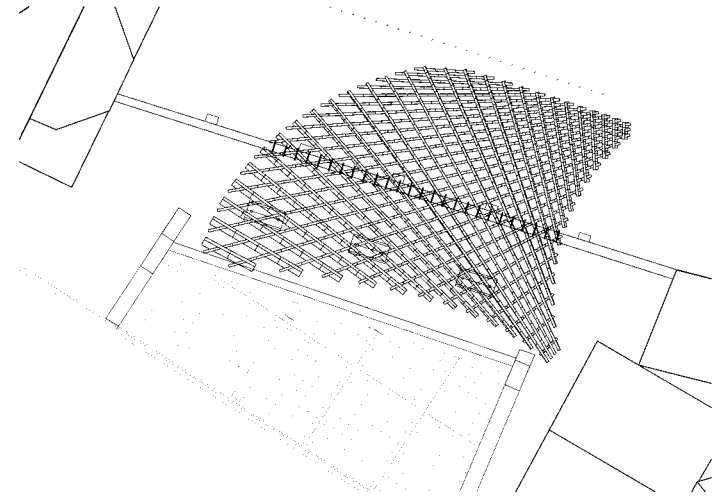


1b

1a,b Section and topview of the installation in low tide condition



2a

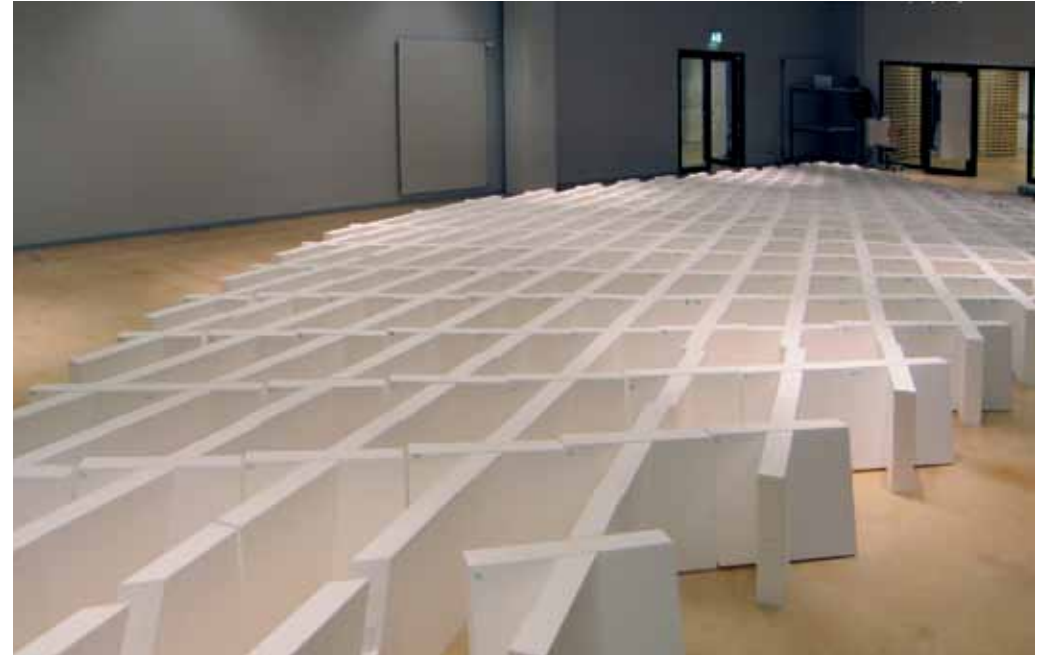


2b

2a,b Section and topview of the installation in high tide condition



Production of the structure at ECAL + EPFL Lab. The demand for space was generously met at ECAL in Renens.

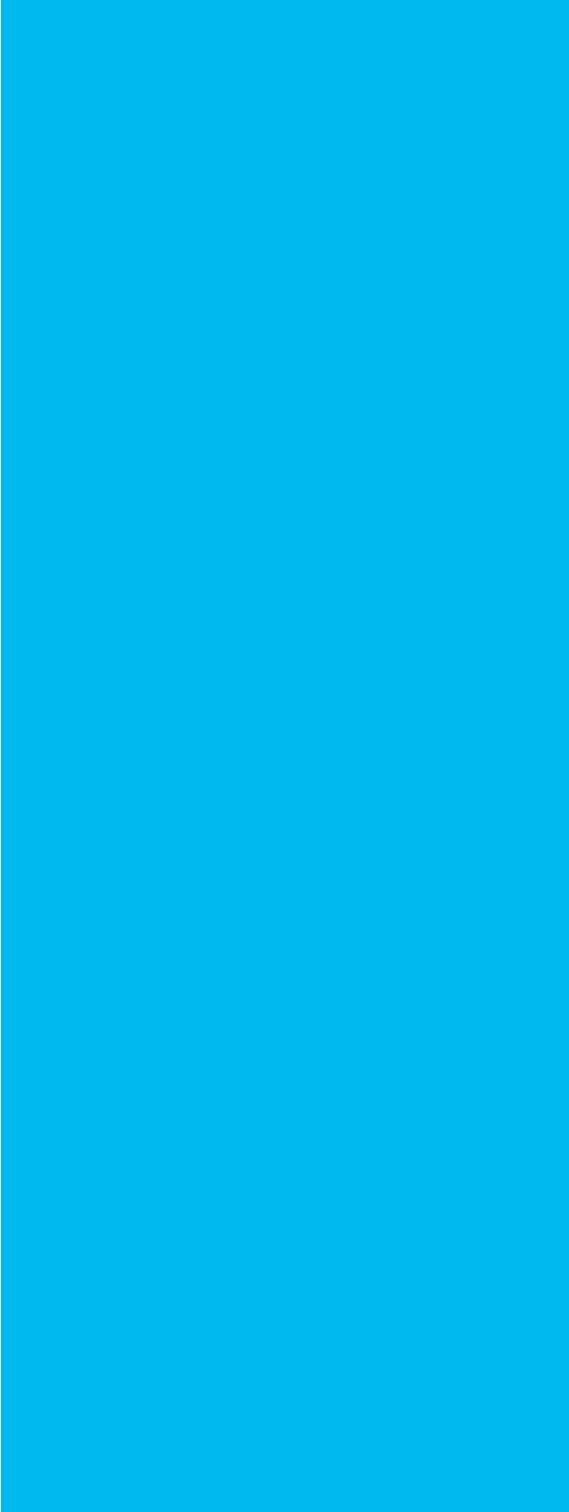


Final structure at ECAL + EPFL Lab.

test assembly

The final proposal for Overflow was test-assembled in Renens near the workshop facilities at ECAL on a football field on 6th June, 2008.

It is a structure of 9 by 15 meters expansion. Conceived as a flexible post-tensioned polystyrene structure, fastened along the embankment parapet as a hinge, it is to pivot according to the tidal amplitudes in the Thames River.





Test assembly on a football field in Renens near the ECAL + EPFL lab.



Test assembly in Renens



Test assembly in Renens

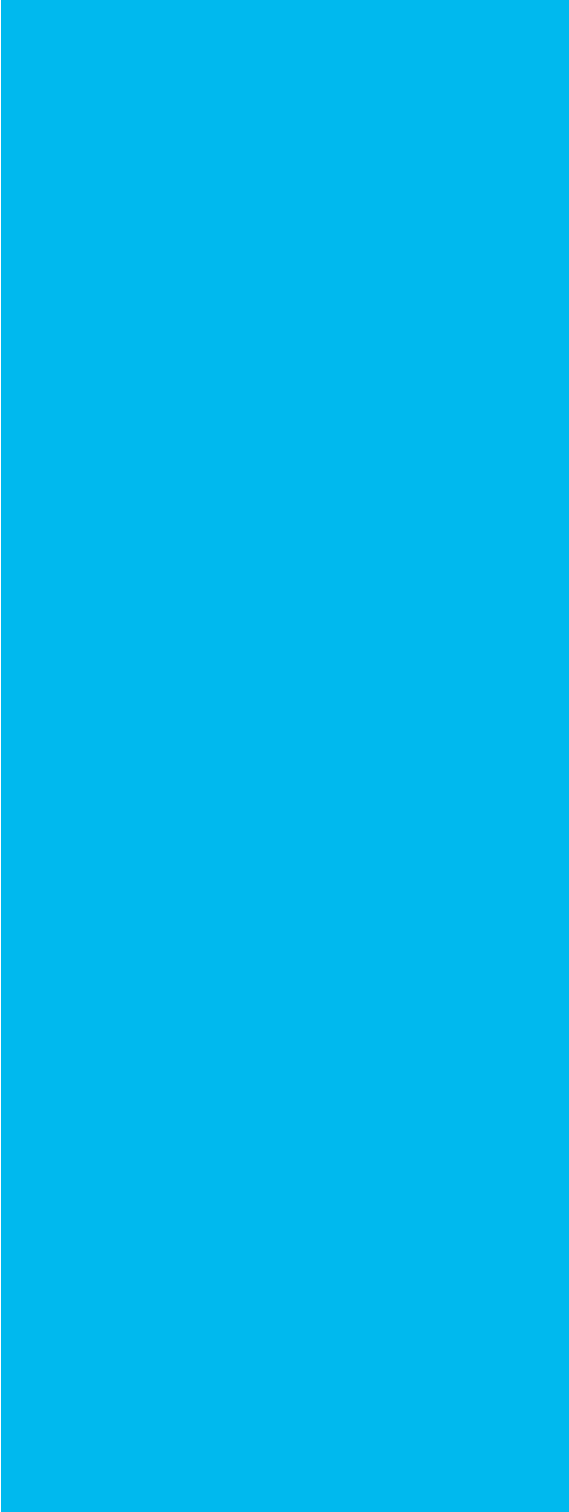
overflow in london

The installation was finally mounted in Southwark at the South Bank of the Thames river in front of Tate Modern.

Its spatial structure behaves as a tectonic overflow, from water to land. Although the Thames has largely influenced through times the development of the urban fabric of London, a personal and physical connection to the river is still restricted today by an imposing embankment.

This buffer zone absorbs twice a day an almost unnoticeable level change of water of over six meters, mainly vertically along its retaining walls.

The proposed installation attempts to first accentuate our awareness of the tidal phenomenon and then transfer it into a physical experience expanding from a vertical to a horizontal spatial configuration over the embankment walkway.





1



2



3

1 The stacks with the disassembled members properly placed at the river walkway on June 18th, 2008
2 Assembled structure



4

3, 4 On June 20th overflow was installed at high tide around 4pm.



The mounting was staged as a public event. About 50 passerby helped to lift Overflow into place and to shift it into its calculated position.



1a

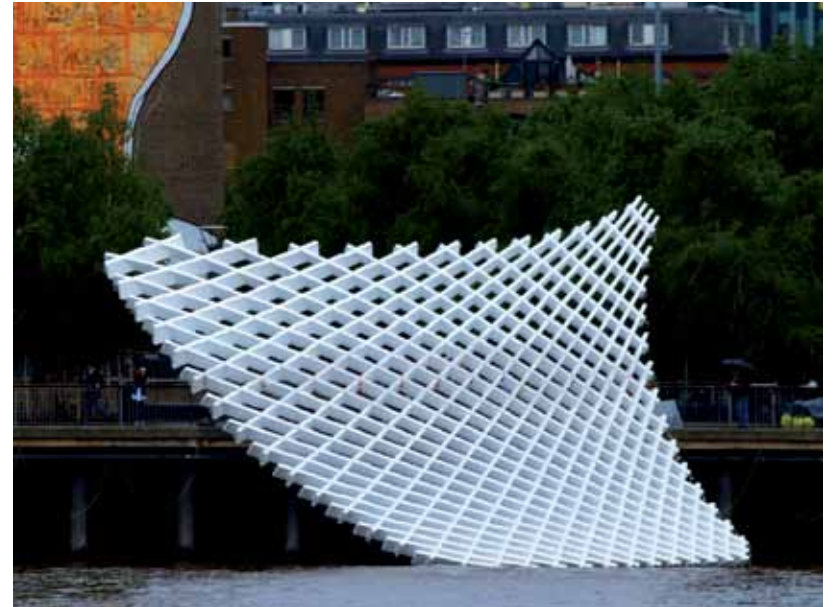


2a



1b

1a,b Overflow at high tide



2b

2a,b Overflow at low tide



Overflow in front Tate Modern





Overflow at low tide



Overflow at high tide



Overflow at medium tide



Overflow at medium tide



1



2

1,2 Overflow at low tide meeting the urban scale, view towards St. Paul's Cathedral



Overflow at low tide, view from river bed



Overflow at medium tide



Overflow at high tide

team

alice students 2007/ 2008

Adrien Alberti, Monica Rita Basbouss Moukarzel, Dorette Baumann, Matthias Bellmann, Fatma Ben Amor , Malaïca Cimenti, Esteban Coto Chavarria, Konstantinos Dell'Olivo, Nicolas de Courten, Nathalie Egli, Clio Gachoud, Ann-Madlen Gfeller, Andreas Gubler, Axel Harari, Steffan Heath, Sebastian Hefti, Lila Held, Alexander Hertel, Loïc Jacot-Guillarmod, Philipp Jakob, Aurélie Krotoff, Thaddée Lucan, Aurel Martin, Patrick Meier, Auguste Michaud, Mikael Monteserin, Minh-Luc Pham, Edouard Philippe, Augusta Prorok, Bertrand Sauterel, Christopher Tan, Sandro Tonietti, Andrés Tovar Nuez

alice team

Dieter Dietz, Eveline Galatis, Olivier Ottevaere, Daniel Pokora, Isabella Pasqualini, Katia Ritz, Marc Schmit

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teaching team

Olivier Ottevaere and Daniel Pokora

pavilion group

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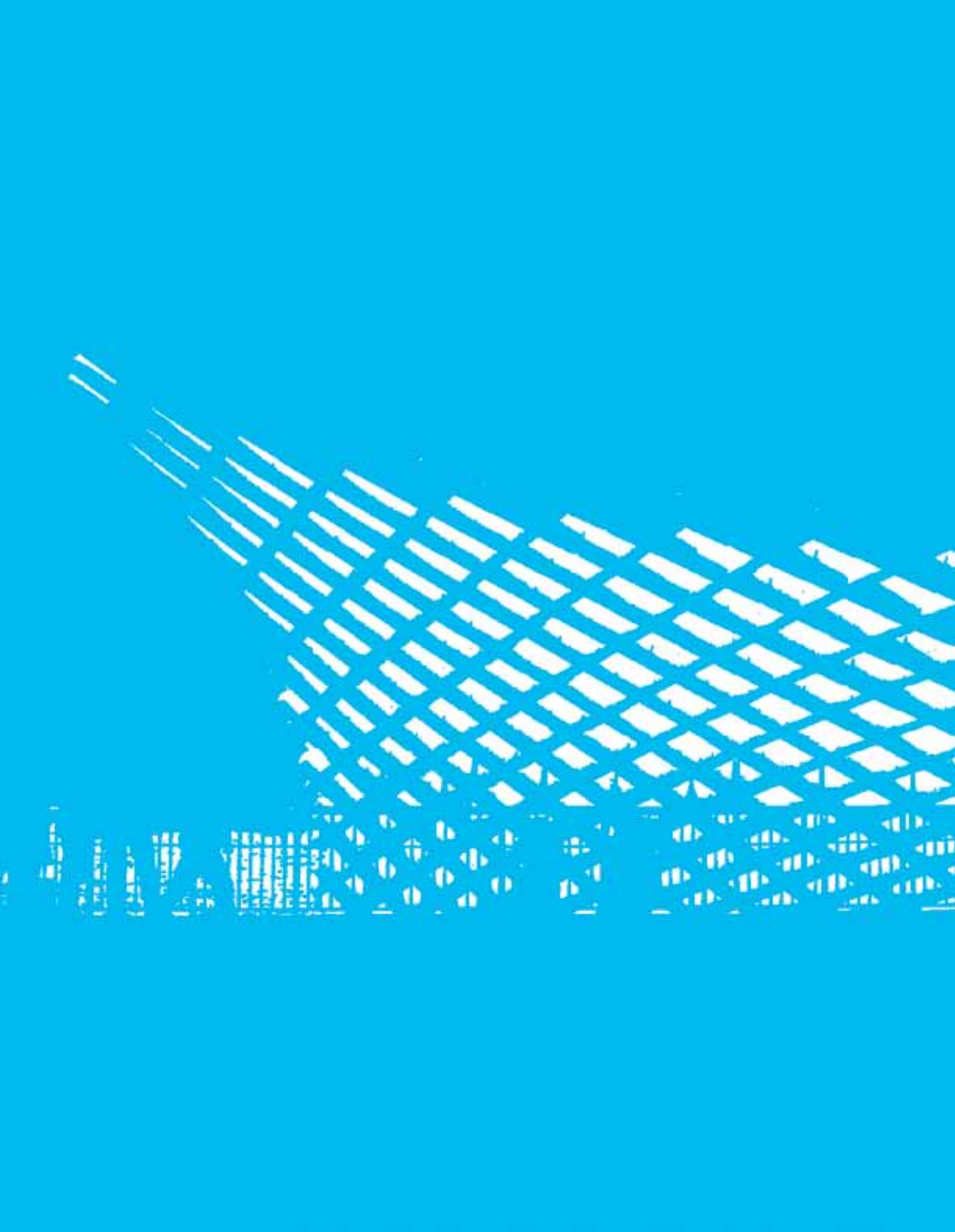
Marc Parlange, Doyen ENAC EPFL; Giorgio Margaritondo, Vice President EPFL; Nicolas Henchoz, Director EPFL+ECAL lab; Ines Lumunière, Director SAR, EPFL; Bruno Marchand, Director IA, EPFL; Luca Ortelli, Former Director, SAR EPFL; Eveline Galatis, ALICE lab EPFL; Anne Markey, London Met University, NASF coordinator; Robert Mull, Director DASD London Met University; Pippa Gueterbock, Associate Director EDAAW; Sarah Ichioka, Director The Architecture Foundation; Donald Hyslop, Director's Office, Tate Modern; Alistair Huggett, Southwark Council

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