

# pontes

para um futuro  
mais positivo

**BRIDGES FOR A MORE POSITIVE FUTURE**

EXHIBITION OF THE ENTRY PROJECTS FOR  
THE INTERNATIONAL COMPETITION OF IDEAS  
FOR A NEW CYCLING BRIDGE IN LISBON

17 SEPTEMBER – 17 OCTOBER 2010  
PALÁCIO QUINTELA, CHIADO

The accomplishment of the exhibition “Bridges for a More Positive Future” combines two priorities for the Galp Energia Foundation: the endorsement of Culture and the arts, an expression of a societies’ development, and work towards a more sustainable urban mobility, which directly benefits the people who live in the city of Lisbon.

Following the international competition with the same name where the purpose was the presentation of ideas for a cycling and pedestrian bridge over the 2ª Circular de Lisboa, arose the idea of making public some of the competing works.

It is our philosophy to have a proactive attitude in all our fields of action. More than supporting existing projects, the Galp Energia Foundation plans to be a true agent of social change, either within the cultural production, promotion of environmental sustainability or any other.

It was from this commitment and enthusiasm that the project for the international competition was created, whose results we now want to share with the public.

Elsa Bebiano  
Directora-Geral da Fundação Galp Energia

It was with great interest that under the theme “It’s About Time” experimentadesign collaborated with the Galp Energia Foundation in the organization of the International Competition of Ideas for a new cycling bridge in Lisbon.

We share with the Galp Energia Foundation the vision of a future where the quality of urban life will follow the embracing of more sustainable habits and lifestyles in terms of mobility, alternative energy and more environmentally friendly construction.

Architecture, among other subjects, is crucial to this process of redesign of urban dynamics, promoting technical and conceptually daring solutions, which will constitute a legacy for the city and the community.

After the exhibition of the winning projects and honorable mentions held in 2009, the current exhibition Pontes Para Um Futuro Mais Positivo is a great opportunity to get to know the exciting and creative proposals that were the outcome of the challenging competition of ideas posed by the Galp Energia Foundation and EXD’09.

The enthusiastic response of the Portuguese and foreign architects to this initiative is an excellent indicator of meaningful and enriching contribution of the project disciplines to the design, fluxes and urban experiences of the twenty-first century.

( experimentadesign )

## EXHIBITION

The Palácio Quintela will hold from 16 September the exhibition Bridges for a More Positive Future, a show of 54 entry proposals for a cycling bridge over the 2ª Circular in Lisbon. These projects are the outcome of the International Competition of Ideas launched in July 2009 by the Galp Energia Foundation in partnership with EXD'09, which challenged architects and engineers to design a new equipment for the city.

A bridge would not only provide the crossing of the 2ª Circular by bicycle, thus stimulating sustainable urban mobility, but it would also be a legacy for Lisbon and its inhabitants.

Reflecting environmental concerns and energy efficiency issues, the projects would have to be sustainable, both in construction and maintenance phases, and the use of innovative materials was valued, as well as the urban and landscape insertion.

Bridges for a More Positive Future presents through models and panels 54 projects submitted in the competition by architects and offices from several countries, such as Bangladesh, Brazil, Belgium, Spain, India, Italy, Israel, Jordan, Portugal, United Kingdom and Tunisia.

An initiative of the Galp Energia Foundation, Bridges for a More Positive Future was open to the public from Tuesday to Sunday (10a.m. to 10 p.m.) and occupied the ground floor of the Palácio Quintela.

Free admission.

## THE COMPETITION

Committed to sustainability and the endorsement of alternative strategies for urban mobility, the Galp Energia Foundation is developing several activities that express their strong sense of social responsibility. The International Competition of Ideas for a New Cycling Bridge organized in partnership with EXD'09 was launched on July 27, 2009. Of the 62 considered applications, 39 were Portuguese and 23 were international; the United Kingdom was the more strongly represented country among the 14.

The criteria for evaluating the projects reflected the key concerns of this initiative, such as Urban Insertion, Architectural Quality, Feasibility / Price, Efficiency and Conceptual Approach.

On 4 October 2009 EXD'09 and Galp Energia Foundation announced the winner of the International Competition of Ideas for a New Cycling Bridge over the 2ª Circular in Lisbon: the Portuguese architects Telmo Cruz and Maximina Almeida.

The 2nd prize was awarded to Moxon Architects Limited, from the UK, and the 3rd Prize to Impromptu Arquitectos + Selahattin Tuysuz, from Portugal.

Two honourable mentions were awarded to Studio Kawamura Ganjavian, from Spain, and to the Portuguese architects of Atelier do Cardoso, established in Spain; a special mention was awarded to the Portuguese architects Tiago Barros and Jorge Pereira.

The Jury of the competition was composed of eight elements: Architect Amanda Leveté, President of the Jury; Jorge Bonito, representing the Order of Architects; Professor Fernando Branco, representing the Order of Engineers; Paulo Costa, Galp Energia; Guta Moura Guedes, Director of EXD'09; Maria Jesus João, architect appointed by the Mayor of Lisbon; Architect João Luís Carrilho da Graça; Engineer Tiago Abecasis.

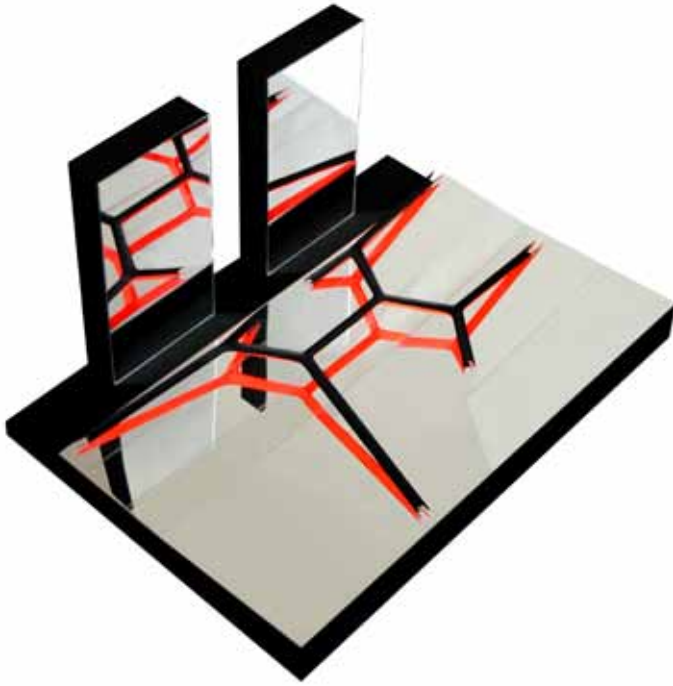
Architect João Luís Carrilho da Graça announced the winners, at Palácio Braamcamp with the presence of José Sá Fernandes Alderman of Parks and Green Spaces of the Lisbon Municipality, the Director of EXD'09 Guta Moura Guedes and Galp Energia Foundation's representative Manuel Andrade.

The launching of the exhibition of the winning projects took place on the 1st Floor of Lounging Space, which was open to the public until November 8. The design of the exhibition was carried out by Portuguese studio mob, which also provided consulting services in the development of this Competition.

PROJECTS

**pontes**

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#### 1<sup>ST</sup> PRIZE

**MXT (TELMO CRUZ + MAXIMINA ALMEIDA + ANTÓNIO ADÃO DA FONSECA) (PT)**

#### ABSTRACT

“Once upon a time” is not the starting point of this bridge history.

Roots of this bridge are to be found in the Future, rather than in the Present.

Ongoing studies about city movements show an increasing combination of transport systems, merging individual transport, generally of private nature, with collective transport. Concept cars of small size, of which SMART is one first example, as well as the Segway Personal Transporter or other pedal vehicles, all very light and efficient, back individual transport based on effort minimization and reduction of dimensions, locating themselves somewhere between car transport and walking.

Over the cities new dislocation maps are already landing testifying this new tendency. Combination of cycling with train, metro or boat transport are already very common, with train and metro carriages integrating lifts and parking bays for articulated or portable bicycles.

This bridge belongs to these new maps where new and old narrow paths for individuals lay over, cross and connect to the existing city routes and transport roads, both individual and collective.

The locale and context of this bridge, with lanes and footpaths through the Benfica, Luz and Telheiras old farms, set an opportunity for a new map. A new map for the inhabitants of the new quarters, creating new passages that will liven up the city grid, thus called ecologic passages.

A major result will be to recover hidden places, full of memory, for the City, together with the grid of meadows, footpaths and open spaces, at least partially still existing but often isolated and thus lost.

From this new map the bridge will spring, literally a new network of routes moving up from the ground, over the busy highway of the “2ºCircular”, just letting back a trace of light that produces a choreography of the varies scales and modes of movement.

The bridge models the flow of land motions, taking the central role of uniting walking, cycling, skating and “segwaying”, all basically non-motorized and non-polluting. In this sense, the BRIDGE becomes a reference mark to mobility, bounded with and binding future urban scenarios, as part of a new urbanity emerging from sustainable development.

#### BIO

Telmo Cruz (Lisbon, 1965) and Maximina Almeida (Aveiro, 1967) live and work in Lisbon. Both teach in architecture studies, respectively in the Universidade Autónoma and Universidade Lusíada. Since 1990 they develop works either isolated or in association, from which stand, in 2001, the 1st Prize in the Invited Competition for the St. Thomas School, in Braço de Prata, Lisbon, (in co-authorship with Pedro Soares, Carlos Mourão e Sofia Castelo); in 2002/2004, the project for the Auditorium of the Arts Centre, Casa das Mudas in Calheta, Madeira, as associate office of the architect Paulo David; in 2001/2006, the project for the Public Market of Comenda (in co-authorship with Pedro Soares), in Gavião; in 2008, the 2nd Prize in the Public Competition for a Cost Controlled Public Housing Development with 40 units in Outurela, near Lisbon, (in co-authorship with Barbini Arquitectos), in 2009 they won the Invited Competition for the Nautical Centre of Abrantes, the 1st Prize in the International Competition of Ideas for a Pedestrian and Ciclable Bridge, in Lisbon, and obtain the ENOR Portugal Prize with the Public Market of Comenda.

António Adão da Fonseca has been a structural designer for over 30 years, a position he has played alongside teaching in the Faculty of Engineering, University of Porto, where he is currently Professor of Bridges. Founded AFA – Adão da Fonseca e Associados, Consultores de Engenharia in 1985 and in 2006 the company ADÃO DA FONSECA – Engenheiros Consultores, focused in the study and project of complex structures of Buildings and Bridges. The highlights of his work are the Infante Dom Henrique Bridge over the River Douro, in partnership with Francisco Millanes and José António Fernandez-Ordoñez - Special Mention for the Outstanding Structure 2006 by Fédération Internationale du Béton; the Pedro and Inês Bridge over the river Mondego with the participation of eng. Cecil Balmont; the Pedestrian Bridge over the Ribeira da Carpinteira in Covilhã, and the pedestrian bridge over the creek S. Pedro, Aveiro University, both in collaboration with architect João Luís Carrilho da Graça.



**2<sup>ND</sup> PRIZE**  
**MOXON ARCHITECTS LIMITED (UK)**

**ABSTRACT**

The concept for this cycle and pedestrian bridge combines a readily accessible and distinctive form with a feeling of security and protection for the bridge user. The structural principle, three-dimensional form, materiality and construction method have been carefully considered to provide a design that is physically, economically and philosophically robust. The bridge comprises a very limited number of elements, the deck, parapet, structure and finish being largely achieved through a single unified architectural form, fabricated from one single material. It is a legible and distinctive structure that is intended to provoke recognition and association with the Galp Energia brand. In formal terms the bridge is a sinuous but geometrically simple object, described by a single plan alignment and a single governing cross sectional shape. The essence of the bridge is its simplicity with few components. It is a hybrid combining aspects of a through trough girder and a closed box beam. The plates which form the sides of the trough act as acoustic and visual protection to the bridge users. These plates wrap around as a continuous surface with the deck box. The wrapped steel surface is stiffened with stiffeners cut from 20mm plate. These act as repetitive U frames which stabilise the top flanges. The surfaces of the bridge will be painted with glass flake epoxy paint as used on offshore oil platforms. It is intended that the outer surface will be painted in an appropriate colour for the location and the requirement for the bridge to act as a signifier for Galp Energia. The inner surface of the bridge would be painted with a satin finish colour that can be readily reapplied to ensure a low reflective surface that is maintainable but that can also accommodate marks and scratches with minimal visual impairment. The night-time lighting scheme will specifically illuminate the internal surface of the bridge to accentuate the interior space provided by the structure and ensure the visibility of the bridge from all approaches. The projector lighting units will be discretely located between stiffening webs, outside of the parapet line and concealed by the horizontal primary structure.

**BIO**

Versatility and a willingness to experiment give Moxon the impetus and ability to tackle a wide variety of projects. The practice has a varied client base, across commercial, private domestic and local authority sectors. Our portfolio encompasses workplace and office design, bridge and special structure design, masterplanning and residential design. The practice's investigative tendency is combined with a fascination for architectural effect and beauty. The practice firmly believes in the notion that sustainability in building should be as much about long-term appeal as it is about energy use and materiality. In 2005 Moxon was the youngest practice selected for the Corus Steel Architects' Journal 40 Under 40 Awards for the best young architectural firms in the UK.



### 3<sup>RD</sup> PRIZE

IMPROMPTU ARQUITECTOS + SELAHATTIN TUYSUZ (PT + TUN)

#### ABSTRACT

The proposed design intends to be an iconic landmark flying delicately over the busy road of “2ª Circular”. Based in the shape of number “eight”, with an unsymmetrical arrangement, it combines in a single and continuous object the three main components of the bridge: the deck, the two access ramps and a suspension arch. The bridge geometry generates a dynamic visual experience, since it offers a rich diversity of forms varying according from where it is approach, both for the pedestrians and cyclists as well as the drivers passing under. Structurally, the proposal is based on a simple system of a deck supported by an arch. Besides the forces from the vertical structural forces, the geometry of the bridge induces torsions and biaxial bending in the section. Due to the type of efforts (biaxial bending with torsion) it is foreseen in the arch a steel box section and in the deck a similar section with the top flange made of a composite floor-slab providing the basis for the pavement. The selection of bridge materials is based on durability and low maintenance. The structure is made out of steel and over the bridge deck it is used a layer of slurry pavement, that should be identical to the cycle paths, in order to emphasize the continuity of the paths through the bridge. The parapets are made of thin stainless steel extruded profiles, spaced with 170mm and capped by a stainless steel top rail. The design comprises a sustainable lighting system. It is used light sources of low energy consumption, such as LED’s, to produce a diffuse and uniform light on the underside of the bridge deck and arch, in order to emphasize its geometry, without causing light pollution or dazzling the road users. For the pedestrian route, the lighting will be punctual and in accordance with the parapets creating a guideline for its users. The lighting scheme is powered by a photovoltaic system integrated in the upper surface of the arch, with a south orientation.

#### BIOS

Nuno Rosado was born in 1977 in Lisbon, Portugal. He graduated in 2001 from the Faculty of Architecture of the Technical University of Lisbon, having studied one year in the Institut Supérieur d’Architecture Saint-Luc de Wallonie in Liège, Belgium. In 2003, he did a postgraduation in “Information Communication Technologies in Architecture” in the Bauhaus Foundation in Dessau, Germany. In 2008, he attends the Design Research Laboratory programme in the Architectural Association School of Architecture, in London, UK, and receives a Master in Architecture & Urbanism degree. From 2001 to 2008, he worked for the Office of Metropolitan Architecture, in Rotterdam, engaged between others in the project of Casa da Música, in Porto, as senior architect. Co-founder of Impromptu Architects in 2008.

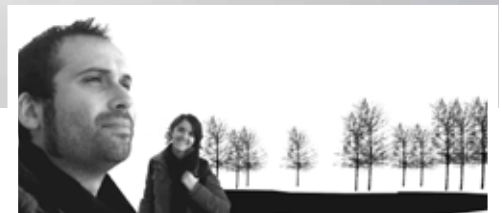
Adriana Rosado was born in 1975, in Caracas, Venezuela. She graduated in 2000 from Lusiada University in Porto. She has worked with several architects, namely João Paulo Delgado and Paulo Cortez. From 2002 to 2006, she worked for Teresa Novais and Jorge de Carvalho in aNC Architects, and more recently, from 2006 to 2008, in the office of Sergison Bates Architects in London, United Kingdom. Co-founder of Impromptu Architects in 2008.

Tiago Branco Sampaio was born in 1980 in Porto, Portugal. After graduating from the Faculdade de Arquitectura e Artes, Universidade Lusíada do Porto in 2004, he worked in Rotterdam in the Office for Metropolitan Architecture. Back in Portugal he worked for the architect Paulo David and aNC arquitectos. He has also worked for Fundação de Serralves on the exhibition “Chain Reaction: Transformations in Hotel Architecture” curated by the architect Luis Tavares Pereira. Co-founder of Impromptu Architects in 2008.

Selahattin Tuysuz was born in Istanbul, Turkey, in 1983. He graduated from Le Lycee Francais de Saint-Benoit, and he studied his undergraduate at Yildiz Technical University, in Istanbul and at Ecole Speciale d’Architecture, Paris. He received his master degree on Architecture and Urbanism from Architectural Association DRL master program in London. He worked in several offices including Dominique PERRAULT, Anthony Bechu, EAA and Zaha HADID. He continues to work on architectural projects in his London and Istanbul based office “Selahattin Tuysuz Architecture”. He won several international competitions and his works participated in several exhibitions in London, Paris, Berlin, Delft, Innsbruck, Augsburg, Istanbul and Ankara.



## HONOURABLE DISTINCTION ATELIER DO CARDOSO (PT)



### ABSTRACT

We embraced this project by taking some time trying to figure out how to mix design and architecture, searching for their linking points, keeping their limits untouched. The bridge should be more than a linking structure trying to make its way through a road, a boundary full of vehicles. It aims to be regarded as a symbol, an icon. Not just another bridge over 2ª Circular that nobody remembers exactly where it stands. Therefore, we propose a strong picture, a ring bridge that reminds the light movement, just like a bright track left by a vehicle passing through. Just like Pablo Picasso has painted with the light. We draw a picture in the air, a movement that, for some seconds, stays still in time. An object floating like a Calder mobile. Lines shaped to suggest movement. Through plain geometry, we draw a light structure and incorporated it in the concept picture. Together with the ramps it aims to establish a balanced state within the urban scenery and the landscape frame. All the accesses are ramps with an inclination that allows a universal mobility. To get this soft inclination, the crossing over 2ª Circular starts at focal points organising circulation on both sides. Regarding constructive solutions we've decided to use a recycled steel structure made of recycled vehicle bodywork. The bridge covering would be made of aluminium foam, 100% recycled, a light material that reduces the structure's dimension and the use of steel. The structure is constructed and assembled on site, the greater parts are carried one by one and screwed on site, like a huge Meccano®. Thus, we get a fast assembly process and minimize the inconveniences of a work in a heavy traffic way such as the 2ª circular. Wind turbines will be installed in the inferior part of the bridge to generate energy through the air movement produced by the vehicles and also by wind. This energy will be used for the night-time lighting. Therefore, we propose a self-sustainable system for the construction and the bridge maintenance.

### BIOS

Atelier do Cardoso is a young office, which has its origins in Lisbon, Portugal in 2005. The two members of the team Mafalda Ribeiro Ambrósio and João Gomes Leitão met at the Lusíada University of Lisbon. They graduated in 2004 and 2003, respectively. The architect's training has been a journey through Portugal and Spain. They've followed a different path in diverse architectural offices, acquiring a diversified experience that they share at Atelier do Cardoso's projects. Participating in design competitions became a platform for experimentation and exploration of new ideas. At the moment they live and work in Madrid. Spain.





## HONOURABLE DISTINCTION STUDIO KAWAMURA-GANJAVIAN (ES)

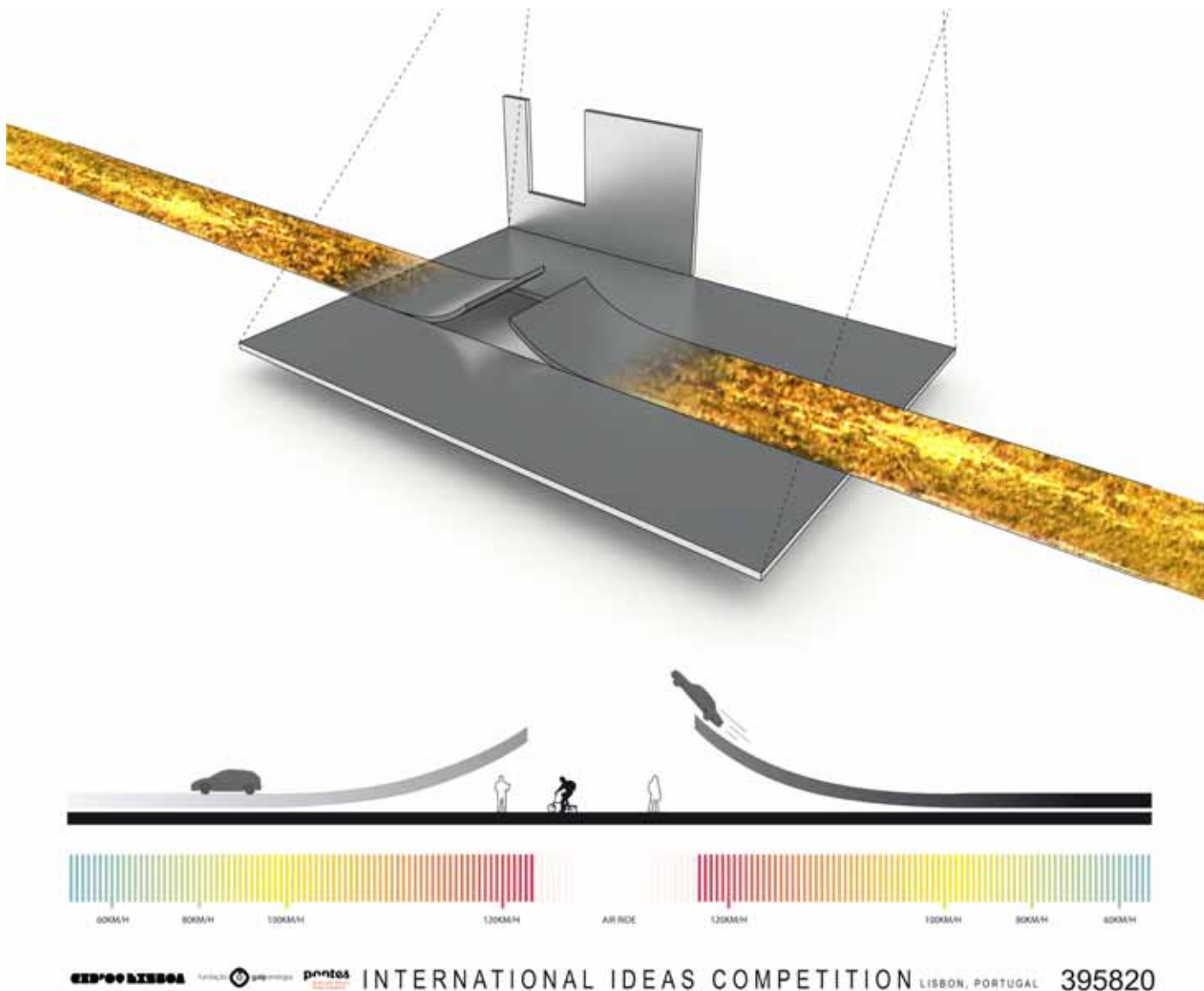
### ABSTRACT

Our first observation when we approached the site was the surprising discovery of some prominent traces of a pre-urban landscape in the immediate surroundings. The almost obliterated orthogonal enfilades of trees bring us back to a bucolic time, prior to the urbanization of Benfica. Can this fragile balance between urban and rural atmospheres be reinforced with the insertion of a punctual element like a bridge? The proposal of the bridge-park is not just to connect both sides of a motorway, but also to re-establish a quality that was interrupted with the construction of the road: the continuity of the tree-lined paths. We extended the two broken up axis, this led to the peculiar shape of the bridge. In order to emphasize the continuity of the enfilades the bridge becomes part of a park, with trees planted on it. This will not just be evident for the pedestrians and cyclists who will enjoy an unusual and refreshing experience, but will also create a moment of reference for the drivers. The bridge-park goes beyond a simple element to cross the motorway: it becomes an experience. Its asymmetric profile adds a layer of complexity, differentiating the perception to the west (lower parapet, traffic, sunset) and to the east (elevated linear park, lush vegetation, paused rhythm). This asymmetry responds also to structural requirements. The main structural particularity of the bridge-park is its half-cantilevered silhouette and the load of the vegetation. In order to compensate these efforts the bridge acts as an elongated semi-monocoque hull with intermediate reinforcing ribs. The bulk of the construction of the hull is done off-site. The on-site assembly is optimized in order to interrupt road traffic for as little as possible thus reducing the embodied energy of the construction. The lighting of the bridge follows a twofold principle. Light-washers embedded in the ground flood the tree canopy, using the foliage as reflecting surface. Low consumption LED beacons hidden under the low parapet illuminate the path. The aim is that a few high-efficiency wind turbines provide enough energy for the illumination. Water supply for the vegetation is provided through a conduct that flows from the north of the site (higher altitude) towards the south (lower). The bridge applies throughout principles of sustainable energy-efficiency and self-sufficiency.

### BIO

kawamura-ganjavian is a young architecture studio established in 2000 by Key Portilla-Kawamura and Ali Ganjavian. After meeting in London, where both were studying, they have worked in several countries: India, USA, Japan, Great Britain and Switzerland in the fields of urbanism, architecture, stage design and product design, both professionally and academically. In 2006 they set up their present base in Madrid from where they direct projects in Spain, Great Britain, France and Switzerland. They are founding members of the multidisciplinary creative platform Studio Banana. The studio understands architecture in its full variety of scales, working in the fields of product and furniture design, ephemeral architecture, interior and environment design, building projects and territorial studies. Understanding that architecture in its broad sense always departs from inhabitation of a space and place, and from basic human needs and emotions, the principles that thread the different scales of the studio's practice are constant and originate from multiple sources.

kawamura-ganjavian are also Pablo Carrascal, Sofie Liesenborghs, Victoria Ovín, Maki Portilla Kawamura, Mónica Mejía, Victor Ruben, Sarah T. Kang, Amir Afshar and Cornelia Tapparelli.



## SPECIAL DISTINCTION

TIAGO BARROS + JORGE PEREIRA (PT)

## ABSTRACT

Why change the route of pedestrians and cyclists?

We propose a high-speed car ramp that enables pedestrians and cyclists to freely cross the “Segunda Circular” highway. North and South become connected again.

The car’s path is altered by a ramp that acts as a bridge for vehicles. Drivers are expected to accelerate - burning more gas - which is provided by Galp Energia.

The ramp will provide a long lasting event. An event that will take place every second a car goes by. This long lasting show will bring people from all over the World.

A new tourist attraction takes place. The arrival of this new catalyst will foster the redevelopment of the whole region.

## BIOS

Tiago Barros and Jorge Pereira met while doing a Masters in Advanced Architectural Design at Columbia University in 2007/2008. From then on, and being the only two Portuguese architects studying there at the time, they became friends and shared continuous discussions about critical thinking in Architecture and constant research and questioning of the modus operandi of living experiences. Tiago is currently the CEO of Simply Rhino Portugal and he has worked with Aedas in London, Davis Brody Bond in New York and Aires Mateus in Portugal. Jorge is currently working for Diller Scofidio and Renfro in New York and he has previously worked at nARCHITECTS and Skidmore Owings and Merrill.



PROJECT 1



PROJECT 2

## ACVB LDA. (PT)

### ABSTRACT

#### PROJECT NR.1

The bridge layout follows the old boundaries of rural property. It will connect the low-level of Estrada da Luz with the south of the street Antonio Quadros. Over the tray of cylindrical section structure overlap some stringers; they don't have a structural function, but will organize space as a large sculpture on the road, as an icon and surprise feature. Inside we can observe the clockwise rotation of the elements throughout an angle of 180 degrees with the vertical orientation in the middle of the course. We propose this structure be made in wooden gluelam fixed to the metallic structure of the beam frame of the structural beam. The option of this design doesn't stand for the function. It suggests, however, the interior of a bone structure, making the bridge an elongated element, trying to provoke spatial experience and an atypical plastic effect.

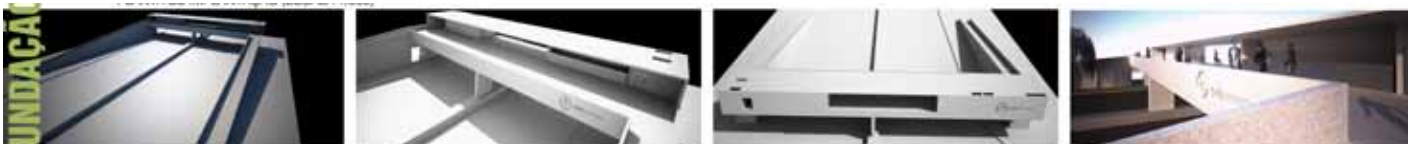




## ANA PAULA DE SOUSA VIEGAS (PT)

### ABSTRACT

The initial challenge of the project was to get inspiration inside the Lisbon city in order to conciliate the contrasting concept of allowing pedestrians and cyclists to smoothly cross one of the busiest routes of the city – “Norton de Matos” Avenue, known as “Segunda Circular” with direct access to the Portela International Airport at North. The dominant vector orientation was to establish dialogue between the poetic graciousity of the curve line and the rationality of the straight lines of the building and roads around trying to harmonize its relationship with the urban surroundings and the landscape frame. Near the implantation site several tracks of swift avenues connects different parts of the city distributing the daily intense motorised movement. On the West border the ground is free of large constructions and on the East, beyond the relatively accentuated slope, are located the charismatic “Torres de Lisboa” buildings. Regarding the context circumstances, we decided to take benefit from the strong visual presence of the arch form which is an ancient and historical architectural solution, which is influenced from the “Águas Livres” Aqueduct, one of the most relevant Portuguese structures, with its enormous ogival arches. The modern interpretation of the stone workmanship of the old aqueduct is well shown in the modern materials used, these can be recycled be and some are already recycled such as steel, rubber, glass and polyester reinforced with fibreglass. The crossing circulation paths of the bridge are carried out over a horseshoe shaped deck, covered by green recycled rubber layer with a nature concept, which highly contrasts with the reality of the dark tar road beneath. The metallic resistant support of the for pedestrian and cycling bridge is composed by 2 main arches that allow the suspension of the platform in all the width of the motorway. The 3 meters wide deck is comprised of metallic profiles. Narrow bands of photovoltaic panels will be installed along the arches and will supply, partially or totally, the entire lighting system. Feel free to use this new accessibility night and day.



**ANTÓNIO MANUEL VALENTE CAMPELO (PT)**

#### ABSTRACT

From the desire of building a bridge to the opportunity to re-functionalize routines:

1. Building a bridge is more than just proposing a connection between two points, which only promotes/empowers mechanical and routine movements.

2. We believe that a bridge should also be a programmatic response. Thus, our work calls for a “programmed” and attractive passage, challenging and engaging to stay...

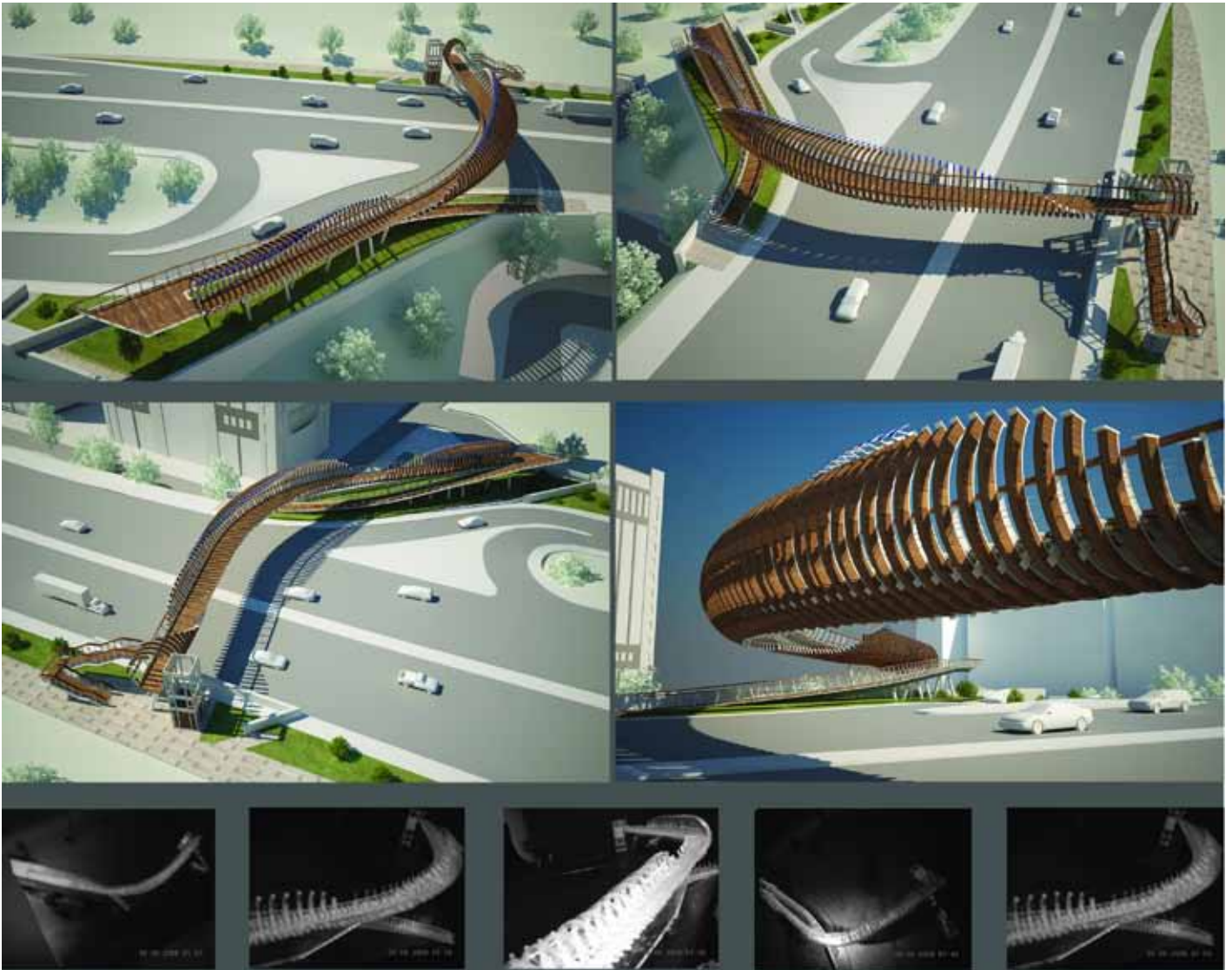
Thus, instead of the normal rushing and anonymous movements, we intend that each pedestrian / cyclist feels constantly challenged to: read a newspaper, drink a juice, eat a sandwich or pamper themselves!

In short, it is time to be positive. With this in mind, we have sought of an interactive and participatory place in social, occupational and cultural terms, through the careful planning proposal for furnishing the path of “crossing”. It is our suggestion that this process is assumed as “ambulatory”, which includes a gym, public toilets, bike parking, a kiosk and a cafeteria, the latter associated with a panoramic terrace. At the same time, it is expected and desirable that such a crossing route becomes a space dedicated to exhibitions / promotion of urban art.

3. To emphasise this multipurpose space, which is also a bridge, we propose that the relationship between the interior-exterior provides maximum comfort and safety for those who stay there.

4. Access ramps equipped with mechanical-lifting platforms are planned. These equipments, as well as all the lights will be powered by energy “produced” in the building by the use of photovoltaic panels installed/integrated on the roof.

5. We propose that the bridge be constructed using concrete. This material will incorporate recycled construction materials, such as ceramic waste or tile powder, which will contribute decisively to the colour of the construction, establishing an intuitive association with the building and its promoter.



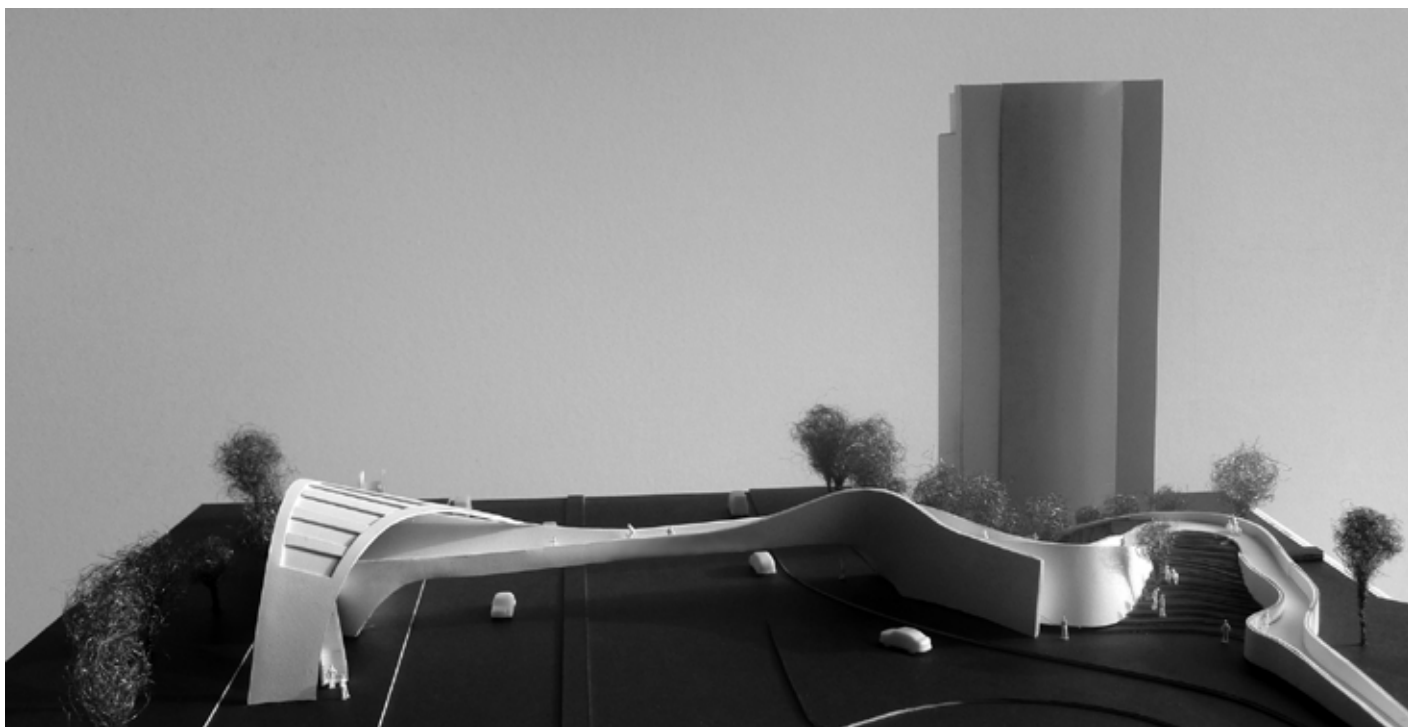
## ATEF KHEDHIR (TUN)

### ABSTRACT

Rising to a height of 10 meters and spanning a width of 120 meters, the bridge makes a link between the two residential zones. The site is surrounded by trees and the shape of the bridge was inspired from the twisted branches of a tree. It is a product of an integrated design approach following the curved lines between the two limits and drawing up a dynamic shape. The section of the bridge is inspired from the GALP energy's logo. The succession of these elements forms the general shape and refined design of the bridge. Sustainable materials will be used for the construction. The different parts will be finished in the factory. This way, we will have less transportation, gain time and, in the final phase of construction, make a quick assemblage. The wooden deck carries the pedestrian and bicycle traffic. The bridge will be illuminated using LED technology. At night, when the traffic is not important, the light will follow this frequency and be reduced. The general shape will be emphasized.

### BIO

Move Architects is an architectural design practice specializing in creating cutting edge and environmentally sustainable buildings for people to live, work, learn and play. Our ambition and expertise extends beyond the dialogue of design of buildings. We look at the entire project and consider the site, the cultural and economic environment, a client physical needs and budget constraints, as well as construction techniques, branding, marketing, and post-occupancy issues. Great architecture demands that design, finance, and technology work together, we are combining these forces in an innovative way to create a new model for our profession. We try to push the boundary of conventional architecture, bringing an audacious attitude and pioneering techniques to bespoke design. Move Architects has over 9 years of innovation, experience and research. Move architects is owned and led by Asma Ben Kahla, Atef Khedhir, Moetez Oueslati and Zyed Ben Cheikh forming the core design and the principals of the group who are supported by partners, professional, technical and management team of 12 people. Our main office is located in Tunis but our services extend beyond the limit of our region to target new emerging markets in the GCC, North Africa and Europe.



#### ATELIER 94QUATRO, LDA. (PT)

##### ABSTRACT

The creation of a cycling and pedestrian bridge over the '2ª circular' in Lisbon is more than a walkway between two sides of a road. It's the union of two parts of the city and the guarantee of urban continuity in reaction to the cut provoked by the rhythm of the traffic. Surpass that barrier must be assumed as a strong behaviour, in an emphasized dynamic against the straight of the 2ª circular. A tectonic movement, creator of an organic space, where limits change as someone walks through. The fluidity of the path is distinguished by several rhythms, a pleasant and accessible act of crossing, a moment of leisure or a meeting point. The materiality of the structure emphasizes the different rhythms, offering a duality between the outside and the inside. The outside acknowledges itself as a dense copper structure, which emerges from the earth, gaining different kinds of tonalities granted by weather and time. On the inside the opaline walls lit up from behind establish an energy current, which shelter and emphasize individual rhythms. But all shapes, forms and materials are involved on creating a plasticity, a new image in the city, an image to settle, an image to remember, that surely will be assigned to the brand of the Promoters. The connection of both sides of the 2ª circular acquires distinct characteristics in its urban integration and surrounding landscape. In the south side, the access creates a new topography, in an intersection of routes of built and natural tracks, creating pleasant green spaces that invite people to remain there and relax. In the north side, responding to the urban characteristics, the access way is more controlled, more direct, but there are also places to pause, reaching a sheltered place that marks a meeting point.





## BDP, UNITED KINGDOM

### ABSTRACT

#### Urban Strategy

The proposed pedestrian cycling bridge is fully compliant with the requirements of the design brief in terms of positioning, road clearance and gradient. Suitably designed for both cyclists and pedestrians, the ramps gradually ascend from both sides of the road with a gentle meandering motion, rising to the clearance height above road level and adjoining onto a level deck, which extends 47 metres in length across the road. This design allows cyclists to maintain a continuous steady speed from the point of access onto the bridge to the descent on the opposite side. The addition of a staircase at each side enables pedestrians to cross the road within the shortest possible distance. The width is determined by the regulation two-way traffic system of a cycle path and a pedestrian walkway, which encourages safe and effective usage by cyclists and pedestrians alike.

#### Place

In close proximity to the Lisbon airport, the new bridge has the opportunity to become a significant landmark for visitors and citizens entering the Portuguese capital city. The design of the bridge aims to be distinguished and inspiring, yet non-iconic. The introduction of such a significant form that does not distract attention is an important concept for the scheme. The proposed cable-stayed bridge respects the tradition of innovative engineering of suspension bridges, such as the 25 de Abril Bridge, whilst at the same time possesses its own unique character and quality. This design has an ephemeral, cloudlike presence, with the gentle white colour values the surroundings rather than competing with them. It allows the rays of light to pass through the cables creating a linear shadow and lighting effect upon the walkway, which changes along with the movement of the sun as well as the movement of the viewpoint. The ribs suspended from the main cables, which enclose the bridge deck, generate a sense of protection for the users and create an almost indoor-like sense of place. The pattern of contrasting shadows will create a playful and enjoyable atmosphere and with the changing shadows will dramatically alter the experience of cyclists and pedestrians crossing the bridge at different times of day.

#### Structural concept

The location and purpose of the bridge implies the need for the development of a lightweight structure, which can be erected easily and efficiently whilst at the same time minimizing the disruption to passing traffic during construction.

#### Ramps

The ramps on both sides of the bridge spring from different existing ground levels and lead to the deck in the middle of the bridge, which is positioned to provide the necessary 6-metre clearance above the road. On the south side the position and route of the ramp is constrained by the existing structures and the local topography.

In order to create a convenient route for the cyclists the design limits the slope of the ramps to 5% maximum. A parametric design model was used to identify the most appropriate overall geometry for this ascent. This model enables all options to be investigated, accurately calculating the constraints of the maximum gradient with minimum length and overall plot required and therefore ensuring that construction costs are minimised.

Parametric and associative modelling has been used to investigate multiple design options, identify the most appropriate solution and maximise the performance of structural elements. The recyclable steel manufactured by precise technology alongside prefabricated metal contributes to the energy efficient construction process.

<http://www.bdp.com/>





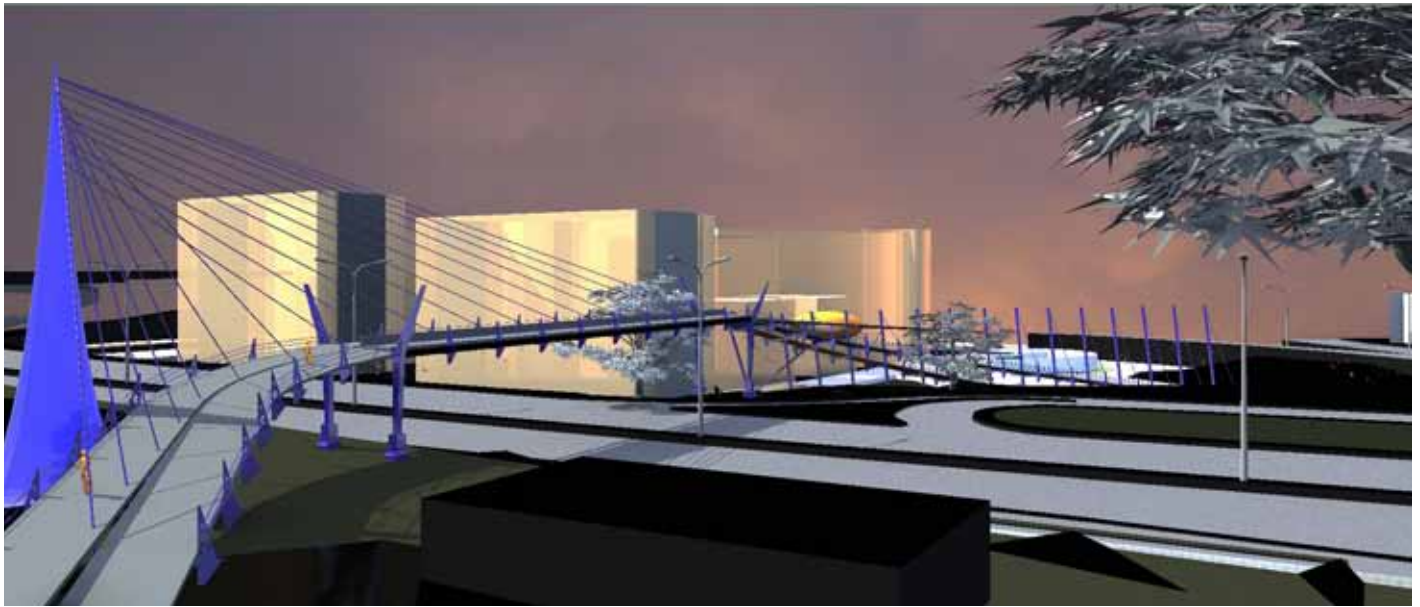
## CARLOS JOSÉ DANTAS DIAS (BR)

### ABSTRACT

New bridge or the speech of a citadel.

In a creative way and with the objective of granting new experiences, the new bridge will give sense of continuity and path to the existing networks of bike lanes, making circuits out of them. A 75-meter Vierendel beam, with a 3.4 x 5.4 meters section, will be conducting the bike lanes into the city of Lisbon. The ramps themselves (massive built pieces that rise from the ground) are the main support of the steel structure over the 2ª Circular. Another two secondary concrete pillars complete the system that will span the total divide it sequentially in three smaller spans of 15, 45 and 15 meters. The whole bridge is built with recyclable or low energetic impact material. The necessary electric energy for lighting and working of the machines that do the maintenance is generated from a group of solar panels located over the main structure. Inside the massifs of the ramps, are a machine room with the batteries that store energy and another room with computers that transform this energy into infinite possibilities of low intensity LED lamps combinations. At night the bridge becomes a flashlight, a multicoloured panel.

To run as someone who seeks cities,  
crossing neighbours, making ways  
marked by the light, blue bathed.  
On the fronts, the big walls of memory make histories...  
unravelling territories,  
with the air as witness, on the new frontiers, unveiling secrets.  
Running and walking as someone Who seeks for the same.



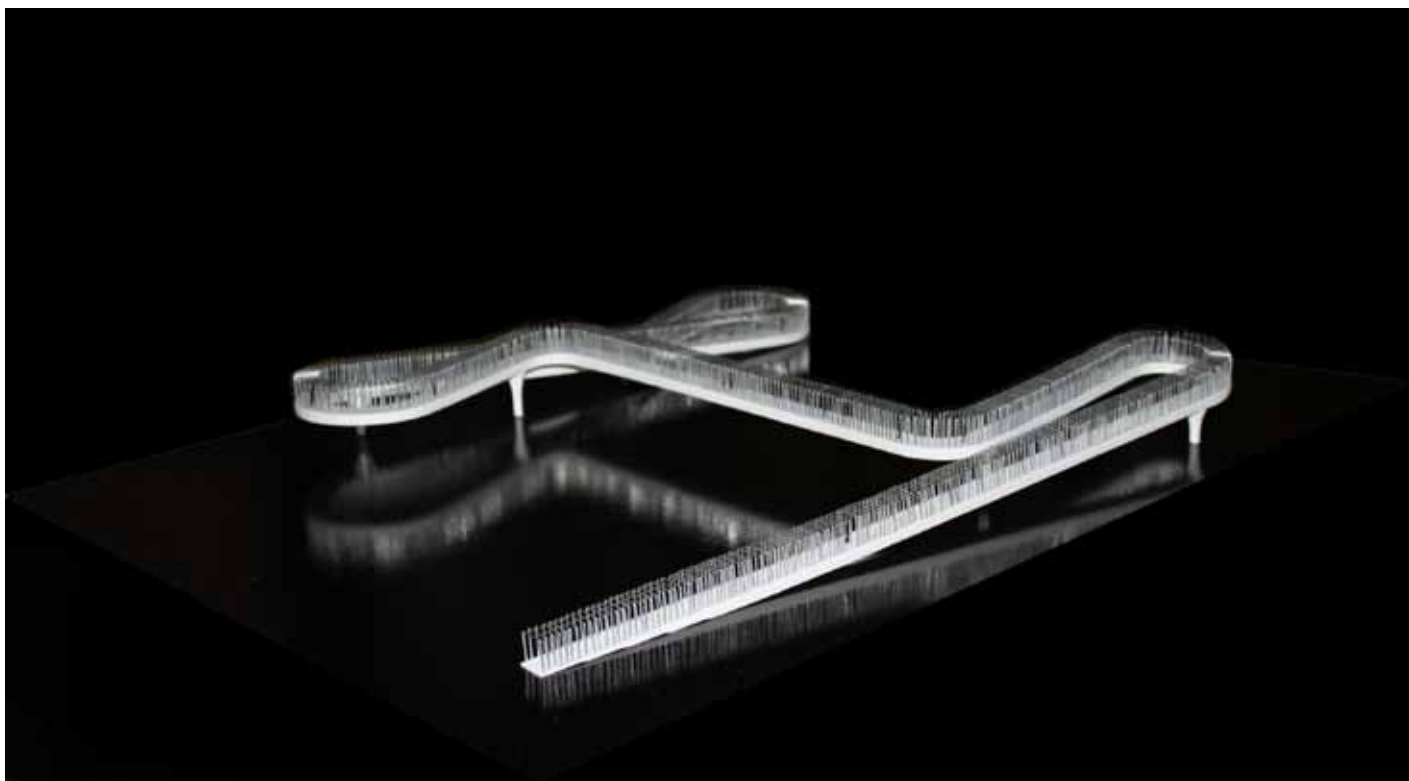
## CARMINE CARELLO (IT)

### ABSTRACT

The project proposal is to render the bridge not only a large-scale structural effort, but also a landscape connotation element. Architecture has been closely related to the structure, keeping the guiding lines of nature preservation and energy self-sustainability. In this context, project logic doesn't want architecture to shape a precast structural scheme nor engineering to make possible arbitrary shapes. The developed distribution scheme consists of an element that is divided in a pedestrian track and in a bicycle path, and a square element, where an oval element is also placed, which is a solar energy accumulator that self-sustains energy needs to enlighten the bridge. As it is similar to GALP's colours and logo, it could be used for the brand's exposure. Other solar panels are placed to the overpass sides in order to make the most of solar light throughout the day. At the northernmost part of the carrying structure there's a large pillar made of reinforced concrete where steel cables start holding up the structure of girders; at the southernmost part there is a series of circular steel pillars that sustain the two slip roads for the overpass. The architectural shape is the result of a study which aimed to describe the bridge not only as a structure, but also as a sign to be contextualized in harmony, light shapes and bends to make the visual impact more pleasant.

### BIO

Carmine Carello, architect, was born in Staletti (Italy), in 1973. He studied architecture at Facoltà di Architettura, Università Mediterranea in Reggio Calabria (Italy) and has collaborated with Franco Purini Architect in Rome and with Global Landscape Office in Lisbon, in 2006. In 2005, he participated in the 3rd International Architecture Project Workshop in Lisbon. Carmine Carello received his specialization in Feng Shui Architecture from the Italian School of Feng Shui Architecture, Rome. He currently works in Italy.



**DOM-INO (PT)**

**ABSTRACT**

Não há abstract em EN

**BIO**

Não há bio em EN



ENRICO CARBONINO (IT)

#### ABSTRACT

This is the reason of a huge corkscrew in the urban landscape of Lisbon: catching the attention of public therefore becoming a powerful “medium” to inform and communicate messages “para um futuro mais positivo”. A peculiarity of this ordinary-use object is its anthropomorphic shape: in communicating positive messages its arms spread open, like a loving mother addressing her sons. Love is the most important message, anyway. The helix, heart of the corkscrew, implies the idea of continuous movement and impresses the dynamic shape of the bridge: the helix gives the energy required to balance and step over the continuous flow of cars moving along the 2a circular. The slope is about 8% and two low energy consumption elevators are in place for pedestrian and wheelchairs. The structure: a clockwise helix together with thin pillars and the elevator reinforce the counter clockwise C shaped ramp from level 94.8 to 99.6 made out of concrete; the bridge structure is a C shaped beam (reinforced pre-stressed concrete) with tie rods from the central pylon-corkscrew. Non-structural parts of the corkscrew can be executed with light materials (i.e. polystyrene coated with resins). So-called “green concrete” is to be used. The bridge should be seen as an opportunity for experimental design and verification of new low carbon dioxide footprint cement products: preliminary a close examination of the most promising “green cements” (from Calera’s cement that promises CO2 sequestration from power plants to the geo-polymer E-Crete or to the more commonly accepted and used Composite Cement) has to be carried out. An agreement with producers and researchers has to be foreseen. The entire bridge and ramps are to be treated with photo-catalytic white paint (or plaster) to assure cleanliness to the construction and to reduce air pollution. Energy saving LED lights are used for lighting system of the bridge: a continuous strip (which underline the shape of building giving general illumination) runs along the parapet banister and remains constantly on during darkness time. Another system of LED lights is switched on and off by sensors at the passage of pedestrian and cyclists, lighting the track. Other low consumption lights light up the corkscrew, the flags and symbols: it has been calculated an average energy requirement – including the two elevators - of 7 KWh per day. An area of about 20m2 of photovoltaic panels is distributed on the upper exposed surfaces of the corkscrew and on top of the elevator wells, producing around 7.5 KWh; moreover a vertical axis wind turbine is located on the top of the corkscrew supplying 2KWh. The energy in excess is sent to the power network, which feeds the system when the energy production does not match the request



### ESPAÇO a3 – CARLOS ALBERTO PINTO VELOSA (PT)

#### ABSTRACT

The program proposes the creation of a pedestrian and cycling bridge to cross the 2ª Circular in Lisbon: our proposal consists of a hanging garden that unifies the “green areas” adjacent to the urban road. Our proposal is more than just a bridge! In a place marked by the bustle and frenetic speed, characteristics of this European metropolis, we are surprised with a moment of contrast - the result is a suspended garden, as an extension of two green edges, which brings us to an environment of tranquillity. As a result, we designed a “suspended terrain” to be crossed solely by pedestrian and cycling users. The distinction of these passageways is revealed by the colour of the recycled rubber floor – yellow for pedestrians and orange for cyclists. The routes are illuminated by vertical structures, which also work as advertising for Galp Energia. These pathways move like wires that carry us for several scenarios marked by diversity. We start this EXPerience with a subtle contact with vegetation, which increases and involves us gradually along the path. The central area of the route is over the traffic area, is marked by a greater density of vegetation, which protects and keeps us away of the traffic activity. The viaduct is supported by a concrete structure and semi-spheres work as “pots” for the large vegetation. The construction is supported by round pillars with an irregular implantation. This dynamic structure is planned to have a system of wind turbines, which together with photovoltaic panels, used in vertical lighting structures, generate enough power for a self-sufficient bridge. There is also the intent of collecting the rainwater for irrigation uses. The proposed structure intends to be integrated with the surroundings, highlighting the relation between the road margins, creating a leisure zone that values the city and those who inhabit it.

#### BIO

Espaço a3 was established in May 1st, 2004, and is a young and dynamic team. We commit to sharing abilities and finding solutions, and have a collective judgment to exceed what is conventional. The Architecture of “espaço a3” has the purpose to create distinct and relevant architecture with the starting point resting within the unique context and specific conditions of the individual project. Taking an active approach, “espaço a3” is involved throughout the whole process, from the early sketch to the on-site supervision.





## FILIPPE MELO E OLIVEIRA + MADALENA SERRO CAIADO (PT)

### ABSTRACT

Once an area of the city's outskirts, the site of intervention is now a moment of great intensity, with a busy road axis, residential areas and services. The proposal of the Cycling and Pedestrian Bridge is designed as part of public space, connecting and re-qualifying two distinct areas through a fluid passing motion. A metal frame holds the bridge that "ties" to a recessed square and a tower at its ends. The square and surrounding garden intended to create a place of permanence, with a coffee shop or bar. The tower – a huge reservoir of rainwater and its treatment room – enables the use of this treated water for spraying droplets on the 2ª Circular, lowering CO2 levels in the area efficiently, for watering nearby gardens or for washing and cleaning of public spaces. The material chosen to dominate the entire project is Bamboo. In Asia this material is considered a pest, however, bamboo is "unlimited" and its use intends to be a reference on present and future sustainable construction. A construction of matter and space in which the motto "it's about time to be positive" applies directly to the positive impact of this part of town, on what concerns mobility, functional uses in leisure and environmental quality. The energy expended for the construction of the proposal is balanced by the reduction of CO2 levels over time.

### BIOS

Filipe Oliveira and Madalena Caiado both were born in Lisbon in 1983 and they both hold an Architecture Degree from the Faculty of Architecture of the Technical University of Lisbon, from 2007. From 2006 to 2007 Madalena Caiado collaborated with CVDB Arquitectos in Lisbon, and Filipe Oliveira collaborated with DP6 Architectuurstudio, in Delft, The Netherlands. Filipe Oliveira has collaborated with Atelier Central Arquitectos and with ATMB13 Arquitectos from 2007 to 2010 and Madalena Caiado with João Lúcio Lopes Arquitectos from 2008 to 2010. They both practice architecture independently since 2008.



## FRAGMENTOS DE ARQUITECTURA, ARQUITECTOS ASSOCIADOS, LDA. (DUARTE JERVIS DE ATOUGUIA PINTO COELHO) (PT)

### ABSTRACT

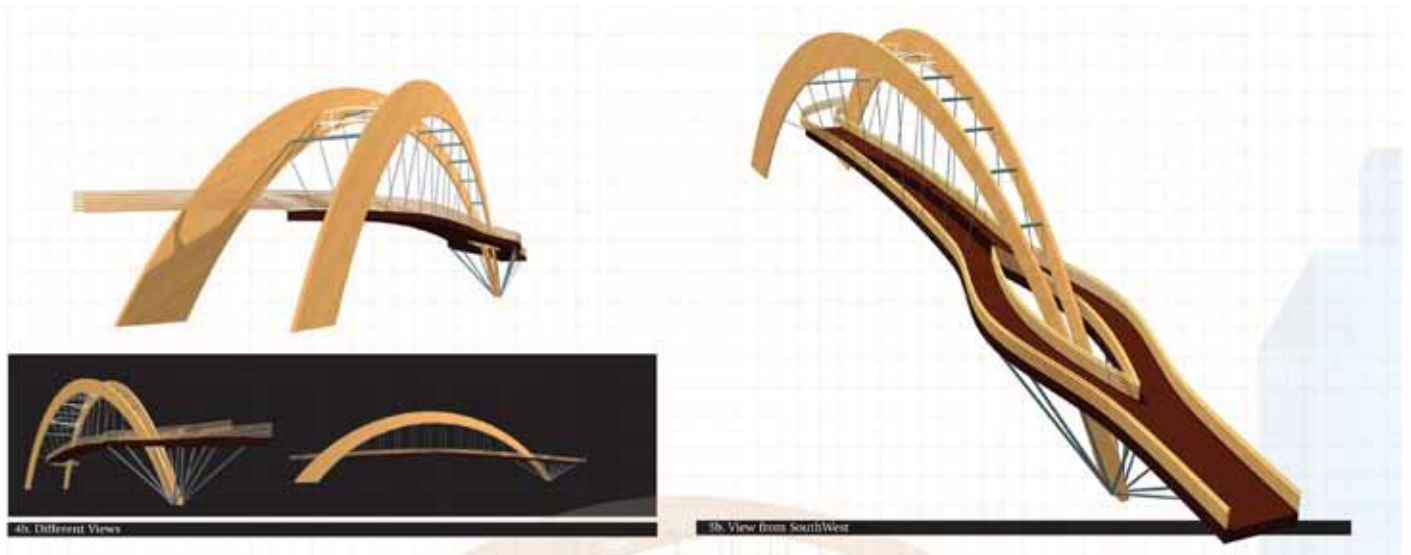
To cross a heavy traffic road, cycling or walking, we must do it fast but as smoothly and as comfortable as possible. This bridge's simple design makes it so direct and so easy going that we believe will invite people to cross it. The bridge starts, on both sides, at the higher levels of the current terrain: level 99,00m (North side) & 94,00m (South side). The platform has an extension of 36m (level 102,00m) and is 7,50m above the 2ª Circular (94,50m). The structure of the bridge is 2m high, leaving a vertical clearance of 5,50meters. The North side ramp is 75m long & the South is 100m, and both have a 6% inclination. The bridge is 5m wide and has a two way cycling and walking lane. Triangular shaped (in section), it has an elegant and unique design. The 3m high panels, on both sides of the platform (where the traffic is closer), offer a good acoustic and wind protection. Sustainability & Innovative Materials/ Signature of "GALP ENERGIA" brand:

For practical and cost-effective reasons the structure of the bridge is made of steel, easy and simple to build (a T shape; central beam & deck) that can be produced off-site and rapidly mounted on-site. Steel can always be recycled and re-manufactured for a new proposes. Only the pillars are in white concrete. The "skin" of the bridge is made out of 13mm thick Eco-Resin UV protected panels in GALP's orange colour and translucent in the protection panels. Eco-Resin is recycled material, durable, cleanable, renewable and translucent. Photovoltaic panels are employed to produce energy (micro-production) and the "skin" and the deck are lighted with florescent lamps (high energy efficiency), along both sides of the 211m bridge!

### BIO

O FRA G MENT OS de Arquitectura, Arquitectos Associados – Lda, is a solid Office, with 15 years of existence. FRA G MENT OS funders are long time friends that have brought to the team many trainee architects that end up staying, until today... enlarging the "family".

With an average of 40 projects per year they also participate in 2 or 3 Competitions (Private & Public), which, in some cases, have been built or granted awards. 95% of their clients are private. The partnerships that are regularly made with the clients have enlarged the quality and Excellency of their services. This effort has been rewarded and is confirmed not only by the return of old clients but also by the frequent endorsement of FRA G MENT OS to other clients.



## FRANCISCO LIZARDO BARRACAS MILHEIRIÇO FONTES + TIAGO BOTELHO DE AMARAL AFONSO ALBERTO (PT)

### ABSTRACT

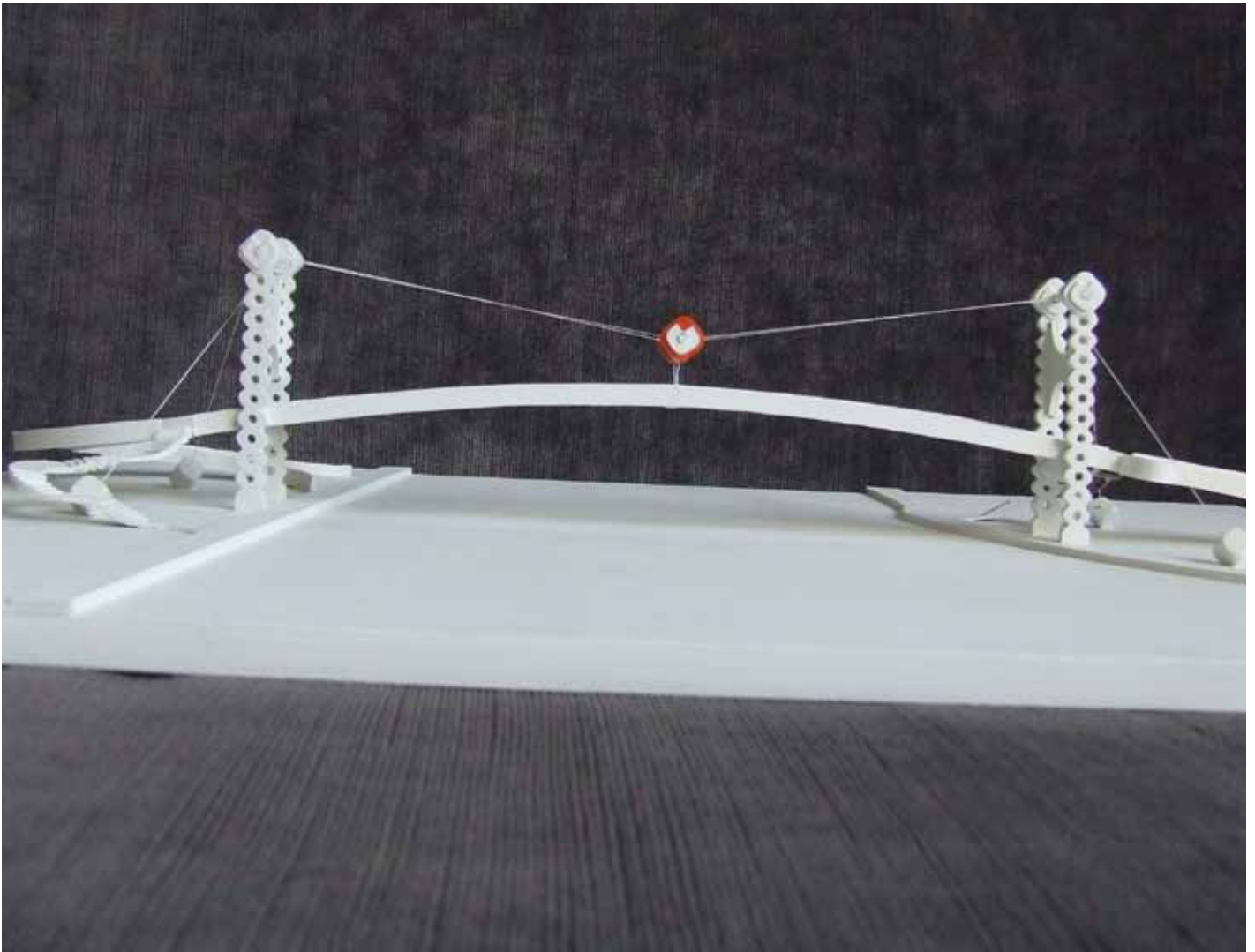
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### BIO

+x is a partnership between the architect Francisco Fontes (Form-Architects), and architect Tiago Alberto Botelho. Francisco Milheiriço Fontes was born in 1972 and graduated in 1998 at the FA-UTL. Between 1998 and 2000, in Rome, he matured with “Massimiliano Fuksas Architetto” and works with “Professor Arch. Paolo Portoghesi”. In 2000 he returned to Lisbon to create his architecture studio “Form-Architects”, which has developed innovative concepts to incorporate new forms and materials, integrating functionality, simplicity and consistency. He currently attends the course of Advanced Studies in Bioclimatic Architecture at FA-UTL.

Tiago Botelho Alberto completed his architectural education at ULHT in 2001. He worked for Saraiva e Associados (pt), Studio 33 (pt), Di Martino Studio (it) Tacto – Atelier de Arquitectos (pt), and for the Boom Festival 2008 and 2010 as a technical consultant. He’s been undertaking a PhD course on Urban Planning at FA-UTL since 2008.





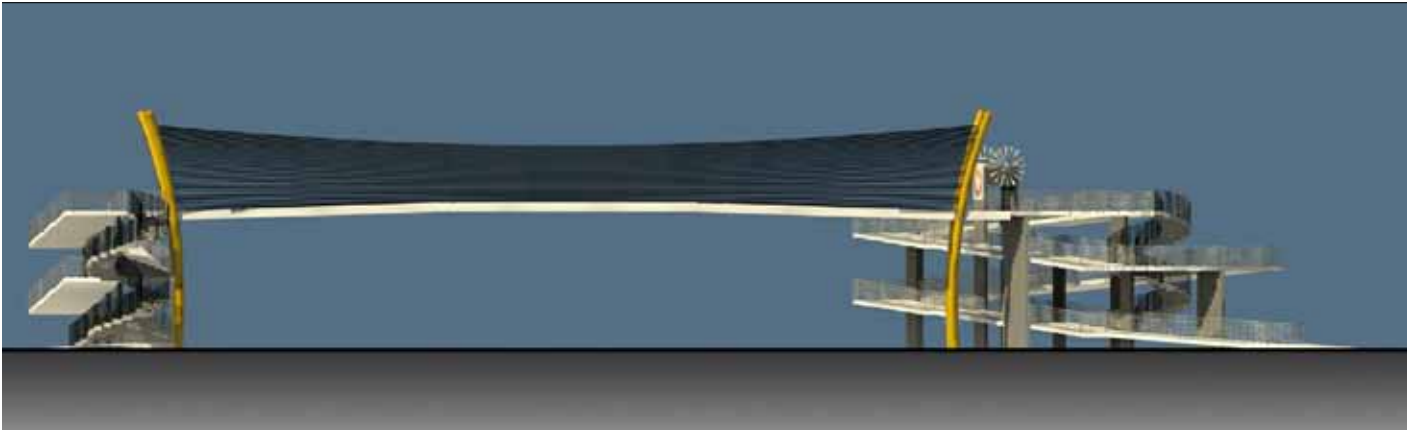
## GADI GAL (IL)

### ABSTRACT

I took the logo of Galp Energia brand and developed the language of the bridge from it by giving different elements shapes that are derived from it. The bridge is supported in three points, two at the ends via the concrete beam that runs between each pair of columns and one at the centre of the bridge. The support at the centre is achieved by tension cables that drop down from the "flying connector". I called this element "flying connector" because it is a structural element that floats in the air and connects the tension cables to achieve the vertical support at the centre. Symbolically this is what the company Galp Energia is doing, by building this bridge it allows people from both sides to connect. The "flying connector" is shaped like the signature of the company. The bridge structure can be built from steel or concrete. The columns will get adequate foundations. The 4 ground anchors of the tension cables will have foundations that will be calculated to absorb the diagonal uplift force that the cables apply. Photovoltaic cells will be embedded in the bridge to supply the electricity needed to illuminate the logo at the "flying connector", the signs with the names of the neighbourhoods at the entrances to the bridge and the lighting fixtures that are embedded in the bridge.

### BIO

Architect and Structural Engineer and BA – Architecture and Town Planning and BSC – Structural Engineering with 30 years of experience in the building industry in Israel and the US. Structural Engineering Experience – 7 years, Design coordination and supervision of large-scale structures. Architecture -23 years, Project Architect – design, coordination and supervision in several Architectural firms in Israel and the United States. Last 10 years, freelancer, commercial and residential projects.



**GUSTAVO MANUEL COELHO MARTINS DAS NEVES (PT)**

#### **ABSTRACT**

Atmospheric Bridge, envisages a cycling and pedestrian bridge concept that would protect the users from bad atmospheric conditions, such as the burning Sun, rain and strong wind. This is possible due to the structure of the bridge: it allows the rotation of the pillars, enabling the cables to get closer and stretched, forming a barrier to the rain and strong sun or wind. The mechanism works with a renewable energies system which analyses the atmospheric conditions: when its excessively sunny, windy or rainy, the pillars rotate and the cables protect the user of this bridge from these weather conditions. This project also intends to create a “green” passage between the Torres de Lisboa buildings and Telheiras, without the need to have elevators to get to the bridge deck, this way providing a healthy lifestyle. We designed 2 ramps and stairs and these allow anyone to use this bridge comfortably, on foot, by bike, on a wheelchair, etc.

**BIO**

Não há bio em EN

[www.jogusurbanos.com](http://www.jogusurbanos.com)



**HENRIQUE MANUEL NUNES DA SILVA (PT)**

#### ABSTRACT

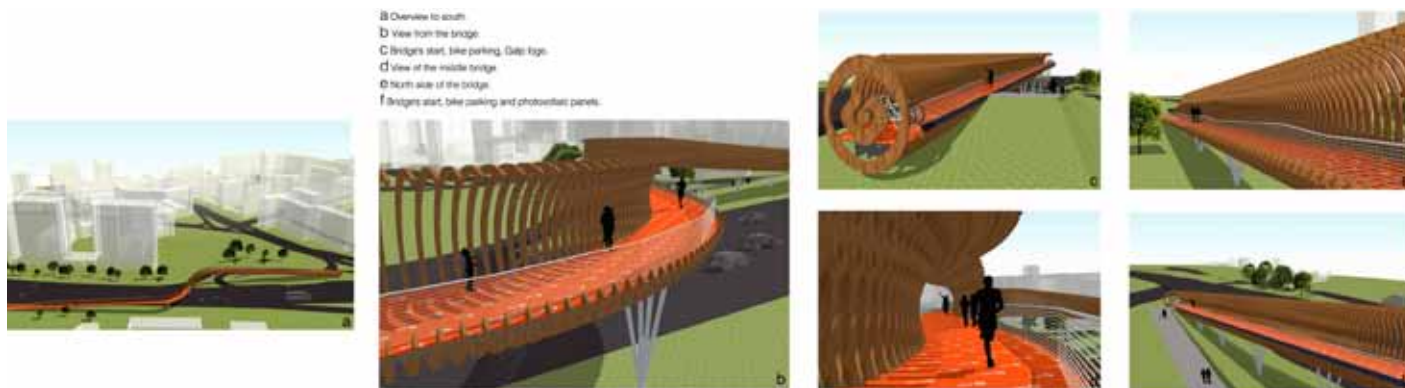
This question is the starting point to which this proposal seeks its purpose, being the propagation of positive thinking it's final objective. To us answer lies in a certain self-inquiry necessary to dwell upon the responsibilities that architecture, as a practice, through its physical manifestations, it's intellectual and cultural negotiations by means of spatial engagement, and finally it's psychological imprints and social implications, has the ability to design time as it sets the landscapes for our future ideas. As such, our objective is positive thinking and the purpose is to set an image for continual creativity. This space is difficult; it is fragmented, accelerated, twisted and overcome with occupation where no sense of continuous movement or thought is possible. A landscape of interrupted ideas, desires and relationships where any effort is futile and all struggles end in fatigue. Thus, we search for the simple, the effortless, and the enjoyable. Our proposal engages in the connection of the two margins by allowing the city to come together for itself. For us, it is not a bridge in the city, but rather the city in the bridge. Hence, we propose to bond pieces of the surrounding landscape that are currently interrupted or left irrelevant into a single living continuous piece of city space. This continuous landscape offers a diversity of public spaces along its path, in which time dissolves into the surrounding spaces by offering more than an objective crossing, but rather a space in itself that can create relationships, share time and grow cooperatively with the surrounding spaces. Time becomes continuous, ideas have time to blossom, and desires have space to come true. Ultimately, to be positive one needs space to think and time to act.

#### BIO

Não existe bio



IMAGO ARQUITECTURA DESIGN + MARKP BRAJOVIC LTD (BR)



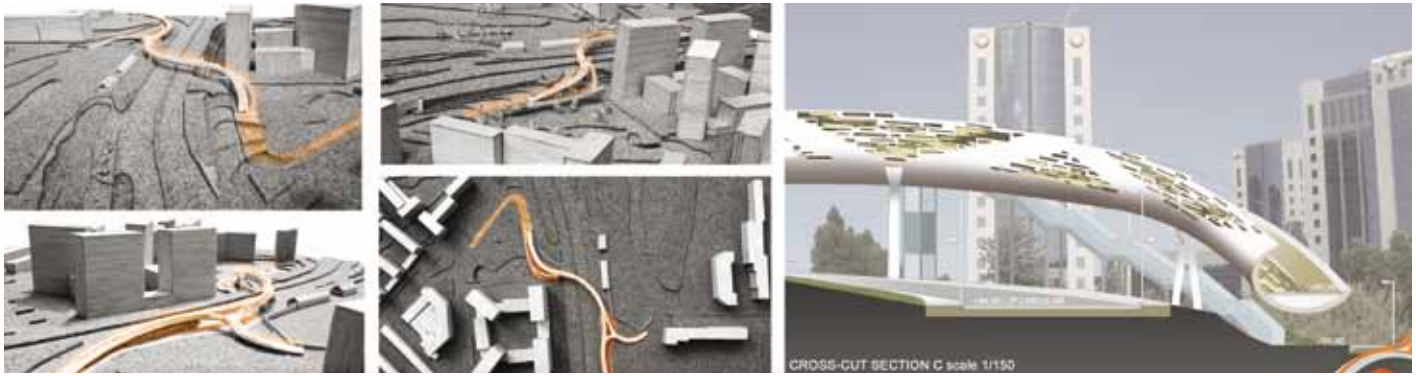
## INÊS GONÇALVES TORONJO GUERREIRO (PT)

### ABSTRACT

With a body that emerges from the ground, this project is about a “turning point”, a change materialized through wood that happens in the middle of its path. Taking the south side of 2º circular as a starting point, this bridge carries its users to the other side, making them cross the “turning point” in the middle of this road. It’s about a bridge that protects the user with its own body from the side where the traffic is more intense and aggressive, where the time is faster, realising the view when they had already passed it, where time is calmer, more humane. Urban integration intends to be a more natural one, so the bridge was inserted in a compromise with the landscape; its sinuous design emphasizes this integration at the same time that it allows the crossing. The design’s main concern was the user’s comfort, since this the crossing of this type of equipment tends to bring some concern for its users. With the creation of a bridge body that protects the users from the car traffic, a passive shading system was also created, composed by a sequence of lamellae wood pieces that adapts itself to the user’s needs throughout its route. The goal was to take the simplest options possible through an effective way, both in terms of material, as well as the choice of energy-efficient solutions for its lifespan. For the main structure the chosen material was steel - a clean form of construction that allows pre-fabrication, optimization of the work time and recycling. For the pieces that create the bridge’s body, the chosen material was wood - a renewable one, as well as recyclable, which requires a very small energy amount to be produced. The image of the promoting brand is also faced as a construction material, so it is proposed to reuse the metal sheets from the drums used in goods transportation for the floor. The bridge is provided with photovoltaic panels that supply the LED lighting; and a system for rainwater collecting incorporated into the structure, to be used for the bridge maintenance. After all, this project is about creating a physical connection between both sides of 2º circular, but more than that, it is a reminder of the times we live through, a striking visual element for this road axis, transforming this barrier of experiences into an opportunity.

### BIO

Was born in Lisbon in 1984. In 2002 she started a Masters degree in Architecture at Instituto Superior Técnico of Universidade Técnica de Lisboa. In 2007 finishes her thesis in natural lighting entitled “The natural lighting in the materialization of Architecture” (“A luz natural na materialização da Arquitectura”) coordinated by Prof. Maria Luisa de Oliveira Gama Caldas. During the degree developed several architecture studies and some collaboration with Portuguese practices like Risco - atelier de design for the publication “Atlas Urbanístico de Lisboa”. Collaborates since 2007 with Sua Kay Architects, in Lisbon. During the recent years has also been developing several projects for international competitions of architecture.



INÊS LIMA RODRIGUES (PT)

#### ABSTRACT

The project is a proposal for a competition of ideas of a new cycle and pedestrian bridge over the 2nd circular in Lisbon, under the motto “it’s about time to be positive”, promoted by Fundação Galp Energia, in association with the ExperimentaDesign 2009. The main aim was to link, the two sides of the 2ª circular, an avenue with intense traffic in both directions at any time of the day, which is not crossable by pedestrians and/or bicycles without the aid of bridges. The contest required a sustainable and energetically sufficient project. The attitude towards these two concepts, beyond the obvious attitude of ecological and renewable construction, was to think of a project that could incorporate the design of a new bridge for the city net in a larger and outstanding scale, promoting connection, circulation, efficient public transportation and in the meantime, positive and sustainable equipment. Lisbon is a city with seven hills, geographically unflattering and where, obviously, the use of bicycles is very difficult. However, the myth that it’s “impossible to ride a bicycle in Lisbon” can easily be overcome if we think of a cycling network combined with other means of public transportation: metro, trains, buses and boats. The bike has to be considered as another mean of public transportation. As in Barcelona and Paris, the “galping system” will allow all subscribers and users the use of bicycles for a short term ride but with the possibility of leaving the bike and getting another one at each “galping station” every time the short term ride is expiring. This way, the use of bicycles is expected to be converted from a leisure mean of transportation to a real one, working simultaneous as a means of transportation together with the metro.

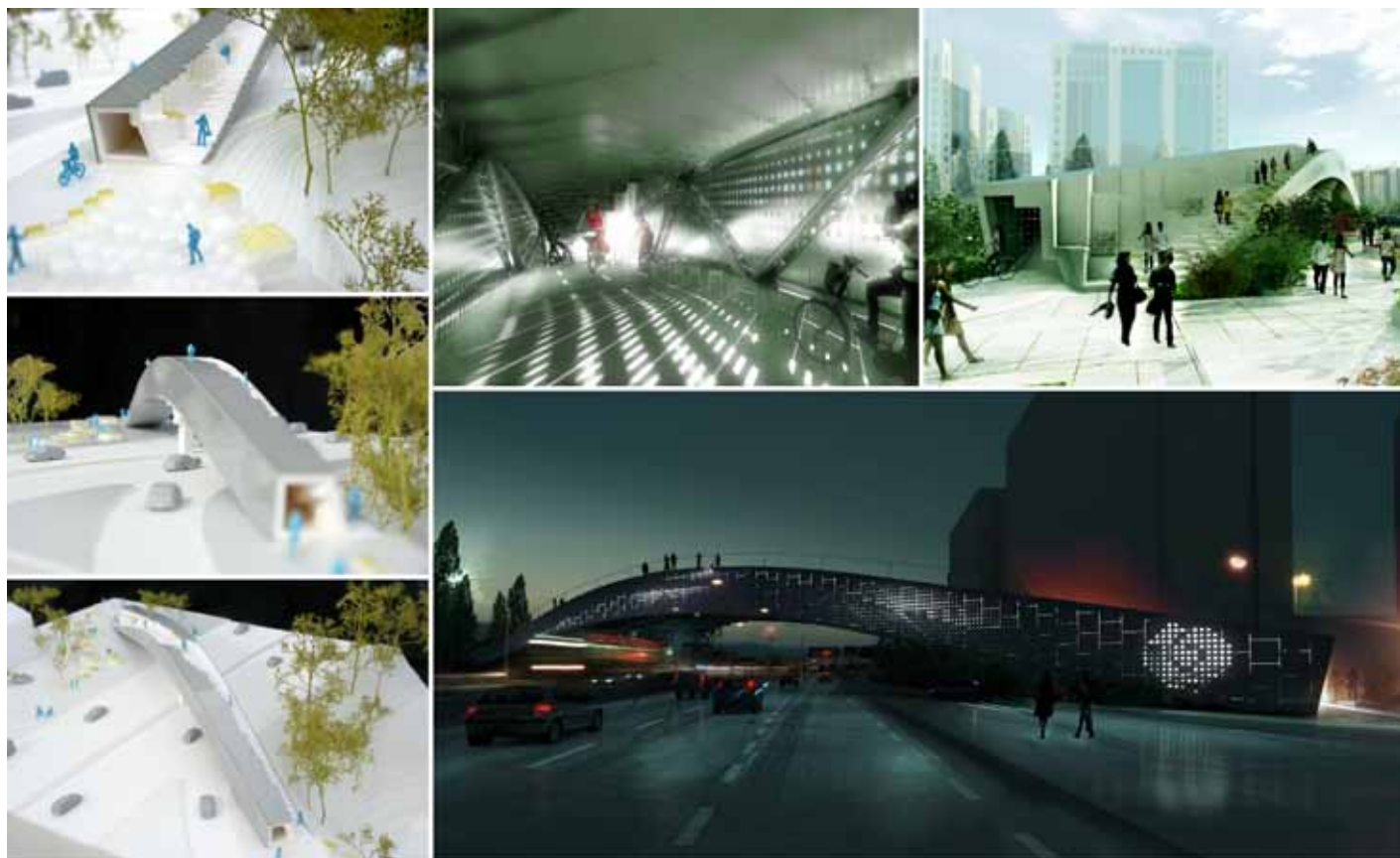
At an urban scale, it creates a new circulation system connecting with the existing ones and generating the connection with the other public transportation.

The bridge proposes pathways in specific locations with affordable and secure implementations. It extends the possibility of transportation for many people and in a quick and efficient approach, this way advocating a healthier life, not only from an individual point of view but also from a more global one. Good public transportation equals a better quality of living.

#### BIO

Não existe bio





JOAO NUNO PALAIO ALBUQUERQUE, JAKOB HENKE, HANNA JOHANSSON E DANIEL SUNDLIN (PT)

#### ABSTRACT

“The Public Path” reintroduces people’s motion into a closed circuit of energy where the energetic production is generated by the circulation of people main. By offering a pleasant space to circulate and inhabit “The Public Path” increases people’s interaction. The movement on the bridge is, via piezoelectric material on the floor areas, transformed into electric energy, which feeds the LED-lights in the facades and thereby illuminates the bridge. In the specific case of the Torres de Lisboa area, the separation of two main housing areas is the outcome of the extension of the city’s transportation meshwork. This project reacts to this situation and designs a coherent public space that spreads over the 2a Circular unifying the two housing areas, instead of just connecting both sides by proposing one detached urban element. As required, the programmatically binomial bridge reflects two distinct behaviours - translated into two different speeds of interaction. Still the human motion should be continuous and linear, reducing human effort to ascend and descend when biking as well as walking. Therefore, our proposal rejects common typologies for cyclist and pedestrian bridges (which impose variable trajectories), and proposes a straight path where the linear height variation becomes more natural and easier to overcome. In this linear typology, the apparent disadvantage, a larger span, becomes an advantage due to a natural site integration: the bicycle path is an instinctive continuation of the desired paths on both sides and the pedestrian path is formed of a stepped landscape flowing into the existing site unleashing and spreading connective paths over variable topographies and sidewalks. The binomial program on this bridge is, by default, split as we are facing different speeds and different translation movements. Still, the programs are symbiotically intertwined, acting as a unified extension of the proposed and existing surrounding circulations and landscape. The outcome of the design process undiscloses a public space, which unifies two once disconnected housing areas by restructuring the existing surroundings and flows. By becoming a successful public leisure and passage area, the bridge embraces its program, as people become the energy generators which illuminate the bridge and the surrounding areas.

#### BIOS

Não tem bio



## KNIGHT ARCHITECTS (UK)

### ABSTRACT

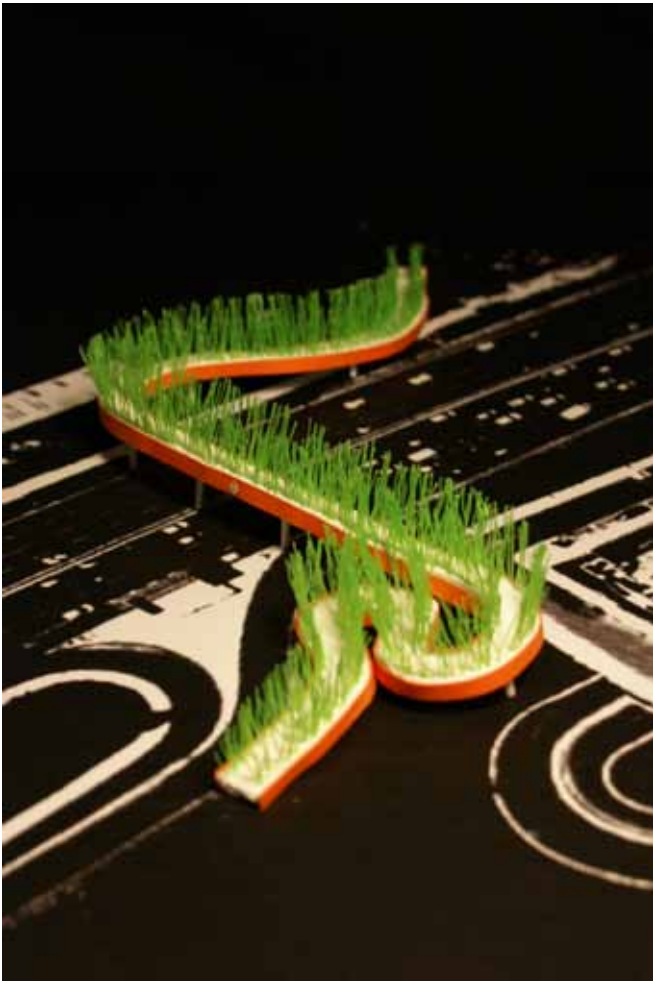
This bridge is a symbol of environmental sustainability and structural efficiency. It takes the form of a stressed steel ribbon, which is designed to showcase the innovative implementation of photovoltaic cells (PV), a technology that has advanced rapidly in recent years. Today, the generation of electricity directly from solar energy is increasingly cost effective and low maintenance. The bridge super-structure consists of precast concrete segments hung on flat stainless steel ribbons, which are suspended between the two bridge abutments and propped at a point between the highway lanes. A series of steel ribs support a wire mesh parapet and handrail, in addition to a curving array formed of PV solar tubes. Over the course of the day, the solar tubes capture the sun's energy, which is then stored and used to power LED lights mounted in the steel frames, illuminating the transverse ribs throughout the night. The energy stores are housed in the bridge abutments, which contain batteries that charge and discharge on a 24 hour cycle. These abutments sit within gentle slopes, which connect seamlessly to the proposed cycle route, so the bridge becomes a highly visible new landmark within an integrated and uninterrupted urban environment. The bridge and the sun are on opposing phases - as the sun begins to set, the bridge starts to glow, releasing the energy it absorbed during the day. The cylindrical shape of the solar-tubes means that they remain perpendicular to the sun all day and so can follow the waveform without reducing their efficiency. The bridge design takes advantage of the North-South orientation of the bridge and the East-West alignment of the highway - which minimises overshadowing in the morning and evening - allowing energy to be collected throughout the day. The high efficiency of the solar tubes means more energy will be collected than is required for the operation of the bridge lighting, meaning that surplus energy may be sold, offsetting the cost of the bridge. This efficient structure will provide a simple and elegant physical connection and also an extraordinary visual spectacle - a 24 hour routine which is played out daily to the pedestrians, cyclists and motorists of Lisbon - absorbing and releasing solar rays, highlighting the cyclical nature of energy and speaking of man's relationship with the sun.

### BIO

Established in 2006, Knight Architects is a RIBA Chartered Practice founded on the beliefs that good design is vital and that simple, beautiful solutions are based on a clear understanding of function, context, value and time. Knight Architects has a strong reputation in the field of bridge design and has enjoyed success in UK and international design competitions, although we thrive on architectural challenges of all kinds. We enjoy the definition of three-dimensional form and how it is experienced over time, how people move through their environment and how context informs architecture. Time and movement are also the source of patterns and rhythms in design, which bring subtlety, richness and complexity. Bridges are an important component of the built environment, highly visible forms that have a significant impact on their locality. The bridge designer has a responsibility to consider a broad range of 'architectural' issues that are as applicable to bridges as to buildings. The architectural approach to bridge design is complementary to that of the structural engineer. Context, composition, scale and function are juxtaposed with fundamental engineering demands for safety, efficiency, economy, durability and constructability as the basis for lasting quality. Beautiful, efficient bridge design should satisfy both artistic and scientific analysis to be visually legible and structurally truthful. Resolving the relationship between the two is the key to every project.

[www.knightarchitects.com](http://www.knightarchitects.com)





**LEMA BARROS + CASTELO BRANCO, ARQUITECTOS LDA. (PT)**

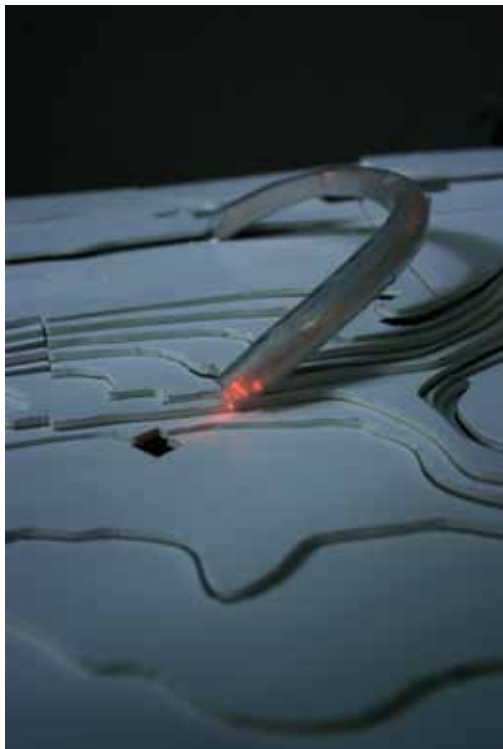
#### ABSTRACT

Based on 3 structuring concepts, this new cycling and pedestrian bridge, is the result of our intention to promote a new way of looking to simple and common natural systems that, in the end, are the first eco-friendly systems, by its inherent energetic efficiency, low maintenance needs and costs and natural urban integration.

1st CONCEPT: miscegenation: urban + rural. Many urban people tend to balance their weekly work routine by escaping to the countryside in their free time. But is it necessary or unavoidable to move to the countryside to escape from city life? What if the way to improve life is not to move the people to the countryside but, in a way, moving the countryside to the city?! We promote this balance not only for those that will use the new cycling and pedestrian bridge but also for many thousands that will enjoy the unexpected view of a common countryside view over a crowded speed way! 2nd CONCEPT: sustainability + recycling. a - Reuse old highway overpasses: Being sustainable is, many times, having the ability and creativity to reuse old and waste objects or using more economical prefab models. This project intends to reuse these waste overpasses that are being dismantled in several locations. b - phragmites communis: creating new green urban areas can be a great challenge, due to the need of guaranteeing its public maintenance and inherent costs, however, this type of vegetation requires low water and maintenance. c- Piezoelectric: we suggest the implementation of a piezoelectric system to contribute to a more self-sufficient energy solution, as well as to promote the individual and collective awareness and participation on these matters. The bridge is fitted with a “bouncing” floor made of springs and a series of power generating blocks. By the walking and cycling traffic this system will produce the needed energy to provide lightning and irrigation system. 3rd CONCEPT: adaptability. This 3rd concept can be understood as the synthesis of the whole project's concepts and solutions. Guarantying the legal slopes and decks, results in a 81,30m long ramp on the north side (to descend 5m height) and 113,00m long ramp on the south side (to descend 7m height); the solution allows multiple-shape possibilities. A unique design attitude can be a multiple-solutions to many different sets: adaptability is the key!

BIO

Não tem bio em EN



## LUÍS FILIPE DE MATOS ISIDORO (PT)

### ABSTRACT

Using as a starting point the idea of sustainability and being the competition one of ideas for a passage over a busy freeway, for a bridge, both for pedestrians and bicycles the thing (and concept) that immediately appeared to us was to take advantage energetically of the natural walking of the pedestrians passing through and also to make the bridge self-sufficient with the installation of photovoltaic cells.

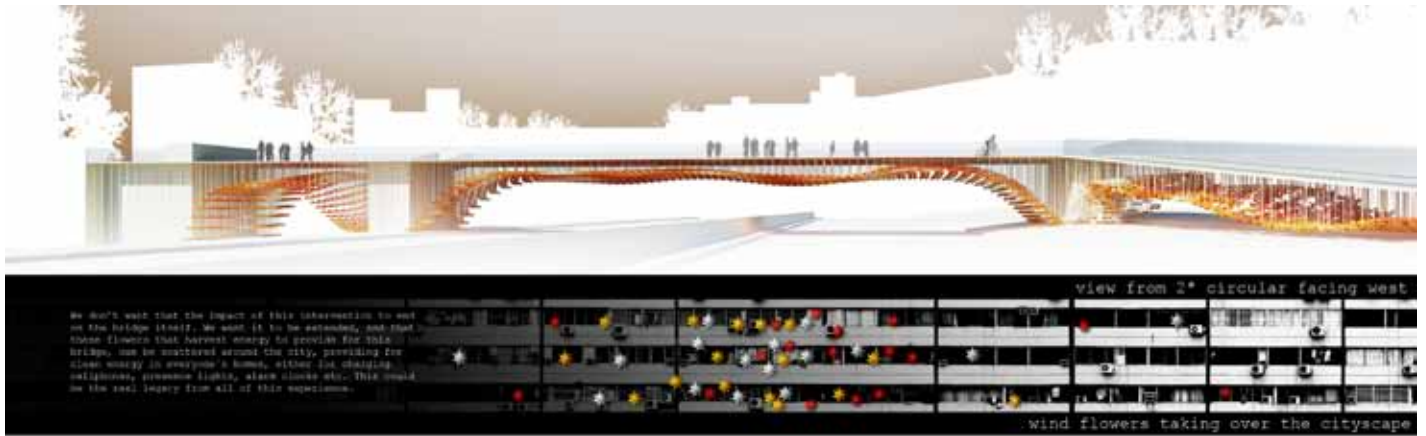
The expected and infinite walking activity in addition to the potentiation of abundant solar energy allows for the installation of a mechanic means of ascending the bicycles via a lift (as seen in Trompe system, used since 1993 in Trondheim, Norway) to the upper platform of the bridge. It also allows for the installation of LED panels in the exterior of the bridge, along the length of both laterals immediately above the road (these LED panels follow the idea represented in an older phase of the artist Jenny Holzer's work).

These panels will be used to display both road traffic information - important for drivers on such a high-intensity traffic way as the Segunda Circular, which this bridge aimed to cross; commercial advertising that will pay for the maintenance of the bridge (giving it the economically sustainability also necessary on a par with energy sustainability) and also institutional information connected with the sponsor Galp, represented by the ever-present brand symbol and logo. The Galp symbol will be serigraphed through the interior of the bridge in the laminated glass panel that constitutes its skin. Present during the day the logo will also be visible at night due to its continuous luminosity - insured also by LEDs in orange.

After establishing all these aspects of energy efficiency, the object appeared naturally in the shape of a tubular arc segment - like a snake molding its body to the earth and the hill, approaching several ideas and concepts that led us to brainstorm about the ideal of a bridge as a passage or means of crossing. So the object we created and called Overtube is akin to the aesthetic idea of industrial architecture, the wheel of a bicycle and to the fuselage of planes. Its not an innocent connection that the object relates to refineries and the machinenary of industrial architecture - it is a direct allusion to Galp's legacy as an energy company, which inspired the basic idea for this shape and object.

Inside the Overtube there are three paths, each one of them measuring 150cm in width. The one in the middle is the ascending mechanical lift for the bikes, avoiding strenuous exertion in climbing to reach the upper platform. The other to the left is also for bikes but without any mechanical means of easing the way up - its destined for hard climbing, close to a micro mountain prize in any bicycle championship. The last path - the one of the right - is destined for pedestrians and is composed by a kinetic floor that feeds the bike lift and the LED panels with energy obtained by the people crossing and walking through the bridge. The upper platform works as a moment of relaxation where just two paths exist - one 300cm-wide for bikes, due to the unnecessary lift in the horizontal level - and the other measuring 150cm of width for pedestrians. This one is still kinetic floor, as observed in the Sustainable Dance Floor TM. For pedestrians, the way up the path evolves in a natural flow of steps designed for comfort.

The bridge is a tubular-shaped object covered in laminated glass panels and structured in a system of three interconnected steel tubulars. They are supported on the terrain in four different spots - at each extremity of the bridge and in two intermediate positions (using the islands between the different traffic lanes). From the tubular structure a skeleton of steel beams rises closing the structure and allowing for the glass skin to be put in place. The opening of several windows/ entrances/ openings in the bridge is intended to create observation points affording different prospects over the city. In the upper level it will function as a belvedere, introducing a sense of rhythm of observation for pedestrian and cyclist alike, adding further movement to the path traveled.



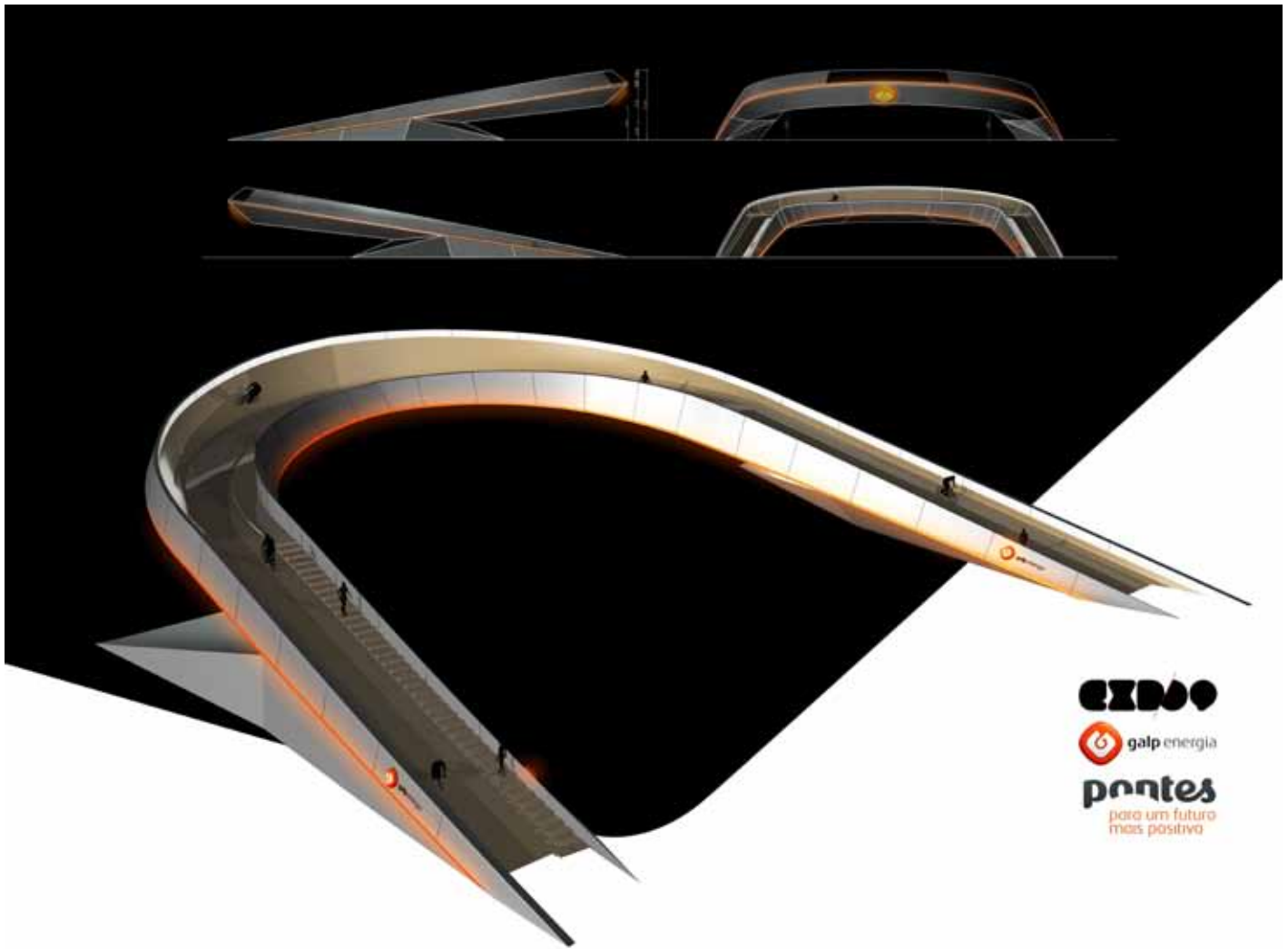
## MARCELO CLÁUDIO DE MENESCAL SOUSA DANTAS (PT)

### ABSTRACT

This exercise was launched from its original and main purpose: to solve a direct pedestrian connection between two points separated by a heavy traffic road. If this is done in a way that its use becomes intense and efficient, we'll have granted our first point in sustainability. Building a new bridge over a heavy traffic road already populated with dozens of other bridges suggests that this particular one should be special. It must be different from all the others... fun... dynamic... colourful. With this in mind and the fact that we are promoting a specific brand - GALP - we will take our chances and go for something that is more in the field of urban artistic interventions. But this artistic intervention must be embedded with clean energy innovation, eco-education and a marketing statement all in one! In the end, all of these premises shall generate a structure so strong in its image and appealing in its usage that it will be forever linked to the promoter of such an urban happening. After providing the bridge's users with an efficient and comfortable infrastructure that takes them directly to the Estrada da Luz level, we now seek to make it an efficient structure in terms of environmental issues. We do not seek farfetched and illusional solutions; what we'll propose is adequate for the theme and for the site. We'll not focus on the more current and common sense solutions like rain water storage, recycled and recyclable material usage etc, even though all these solutions are in fact integrated in the Project. It is not only through high-tech solutions that you can make a difference, passive means of reducing global warming must also be considered. We don't want the impact of this intervention to end on the bridge itself. We want it to be extended and that these flowers that harvest energy to provide for this bridge be scattered around the city, providing for clean energy in everyone's homes, either for charging cell phones, presence lights, alarm clocks etc. This could be the real legacy from all of this experience.

### BIO

Não tem bio em EN



**MARCO PINTO (PT)**

#### ABSTRACT

Two words were used as the conceptual design purpose, Experience and Communication. Experience, because more than a bridge - object / function, we wanted to make the bridge crossing a pleasurable experience, creating a cycling lane as a whole. Inspired by the Olympic Cycling Competition, the protection wall is taken up as a half-pipe and its layout, simple and suitable for the pleasure of the crossing - a circular track. Wanting to bring cyclists to the bridge as a recreation area and not only as an object of passage to the other side. The second word is Communication. Aware of the importance of the work as part of the city and understanding the brand values and those of the public, we tried to achieve with the proposed project, a statement of pure innovation and sustainability, not only in terms of materials and technical solutions but also, and more importantly, through the line simplicity and the iconographic values in large scale building interventions. A single line (arc) is enhanced with LED exterior lights. Electricity is generated by integrated solar panels, which is then charged directly into the network, thus making the bridge self-sufficient.

BIO

Não existe bio em EN



**MARTA RAMOS + FREDERIK DEKETELAERE (PT+BE)**

#### ABSTRACT

Creating bridges provides opportunities, not only to connect two parts that are split by large fibbers like rivers or highways, but a bridge can be more than just a connection. A bridge is enjoyable to cross as it has daylight and fresh air. The high slope at the towers and the necessary height of the bridge (6m) makes it very difficult to keep a slope at 4% to make the bridge wheelchair accessible. Therefore, we suggest that a nearby plot be used in order to reach the necessary slope of the bridge, where a park for the inhabitants and users of the area would also be built. This park would make the area more enjoyable to live in, rather than a suburb. The main concept is duality. A bridge mostly connects two sides in space and lets them mix with each other. Mostly the two sides have different identities and different atmospheres. Instead of combining both regions, we decided to express this individuality by making both arms of the bridge different, yet to have a certain relationship to each other. We expressed this with two metaphors: a tree with wind. The tree has a solid base and would express the rigid structure of the area of the Torres de Lisboa, which can be considered to be very stable. The other metaphor, the wind would suggest the other area of the Quinta da Granja, where planning is still missing and this region also does not have a stable setting. We transformed these metaphors as two structural basics: tension and compression. The trees would be V-structured columns holding the bridge on compression. The wind would be A formed columns holding the bridge by tension. The V and the A join each other where the bridge crosses the highway, forming a rigid structure, which works on tension and compression together. We decided to connect the two arms with a transparent material. The logo of the Galp Company would be made in structural glass and put on the top of the bridge. The materials that would be used will be recovered pipelines as a reference to Galp, a company that primarily provides gas and petrol. The deck is made in FSC pinewood. The remaining structure is made of steel, as it is a very solid and non-composite like concrete, and easily recyclable. The transparent material will be made in structural glass with large joints of 2 cm to let the bridge move around.

#### BIO

Não existe bio em EN





**MIGUEL MARCELINO, ARQUITECTO – SOCIEDADE UNIPESSOAL LDA (PT)**

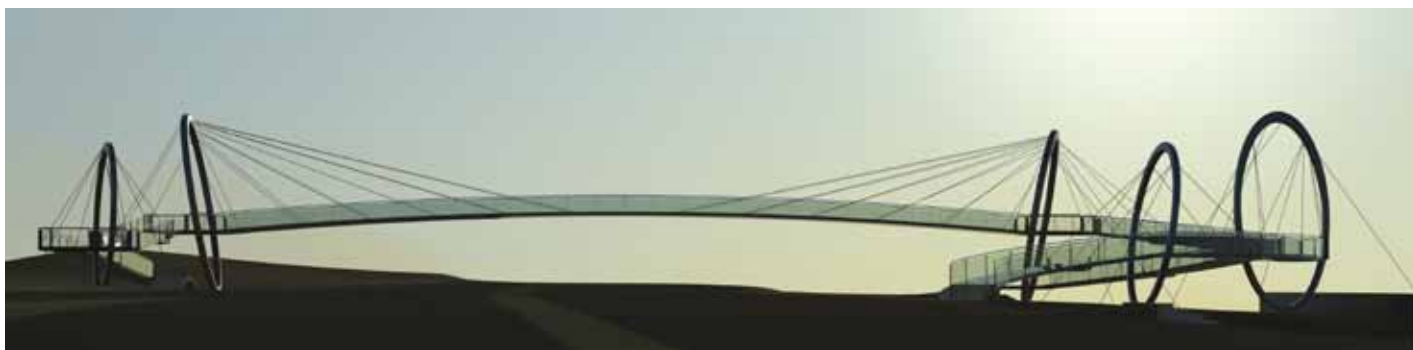
#### **ABSTRACT**

The 2ª circular is a very intensive and aggressive highway that radially crosses the city of Lisbon. The result is a very hostile environment for a pedestrian or a cyclist. Sound measures on site shows traffic noise values of around 90-95db, which are considerable high numbers. Our proposal focuses on taming this environment. We choose as main reference one of the seven wonders of the ancient world: the Hanging Gardens of Babylon. We pick that idea and transpose it into a cycling bridge. We have then a hanging green structure that protects the passerby both visually as acoustically. On the one hand we have the cyclists who are lead into a continuous and organic green corridor, connecting smoothly both sides. On the other hand we have the impact of the image on the drivers, which will be a somehow unusual hanging garden crossing and marking this highway.

#### **BIO**

Miguel Marcelino was born in 1981. Lives and works in Lisbon. He studied music at the Gregorian Institute of Lisbon from 1993 to 1998. In 1999 he started studying architecture at the Autónoma University of Lisbon, graduating in 2005. On that year he is awarded the Secil Architectural Prize - Universities. Worked with Herzog & de Meuron (Basel, 2003/04) and Bonell & Gil (Barcelona, 2005/07). In 2008, back in Lisbon, he establishes his own office and wins his first open competition.

[www.marcelino.pt](http://www.marcelino.pt)



## NA1 ARQUITETURA E DESIGN (BR)

### ABSTRACT

Não existe abstract em EN

### BIO

The NA1 is a studio about architecture and design formed by architects Nahum H. Levin, Denise S. Calfa, Pedro P. Schneider, Vanessa Y. Dozono and Marina Altuzar. We designed objects, spaces and shapes. We believe in the viabilization of a conception in the multidisciplinary, and in the power of a good idea. Founded in 2007 and based on the history of Nahum and Denise's work, the NA1 developed several projects for cultural and commercial exhibitions, shops, events, buildings and also industrial design.



#### NBAA – NADIR BONACCORSO ARQUITECTOS ASSOCIADOS (PT)

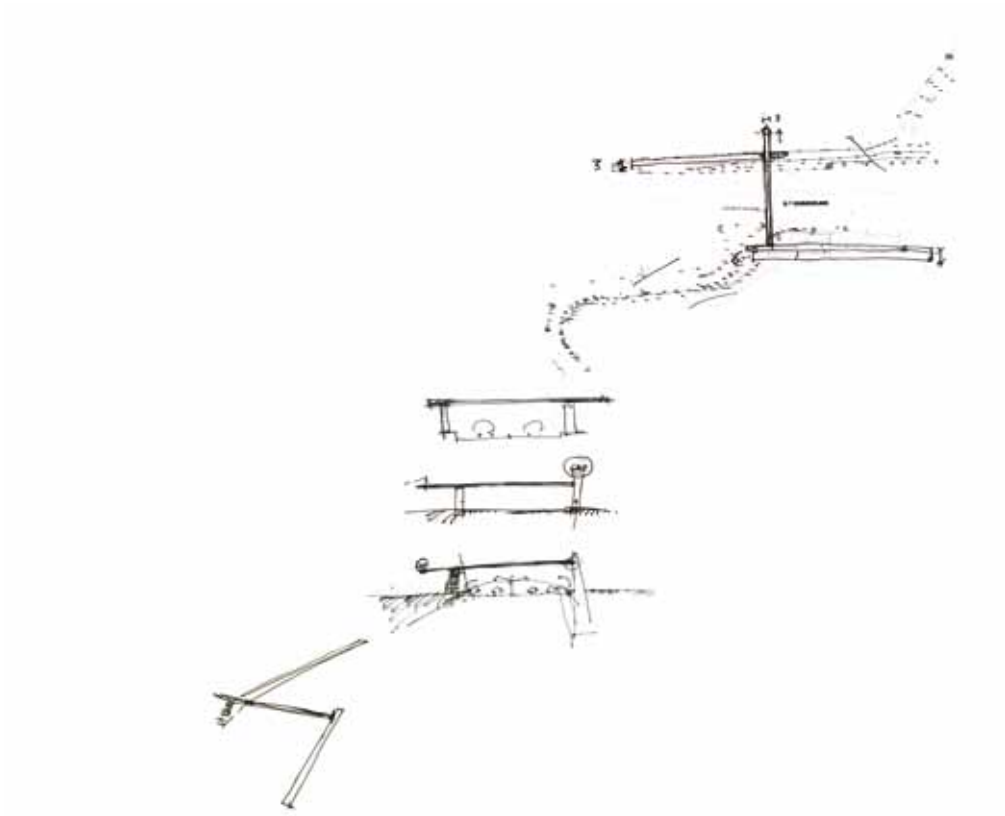
##### ABSTRACT

As a continuity of the existing walkway the accesses rotate to achieve a good inclination and to connect the points. Those volumes have a volumetric distortion that reinforce the dynamism of a walkway, emotionally “pushing” to the centre. Reaching the upper level (horizontal) the suspended volume that crosses the route starts losing torsion and dynamism, creating in the centre a regular section, reducing the sense of tension and “tagging” the Place to Stay as a static space. Inside the steel volume a wood “skin” organizes circulation and public areas, providing with the height of the barriers the needed acoustic protection as well as the visual permeability. Chairs, tables, the little bar kiosk and the designated areas will emerge with the same material (wood) as a unique piece, creating the possibility of week little markets (flowers, books, etc...) to enrich the connections especially with the future park on the north side. The Bridge has a highly irregular form in plan, generating all six tensions on its members (axial, shear in 2 planes, Flexural in 2 planes and torsional). To resist the forces of torsion a caisson structure was developed, due to its behaviour in face of torsional actions. The caisson is materialized with laminated steel beams, forming a truss, on the lateral faces and on the top and bottom deck. This solution allows for an excellent behaviour against torsional, flexural and shear forces and has the advantage of being lightweight, diminishing the stresses installed on the beams. The top and bottom cords of the trusses are materialized with HE320B steel profiles. The transversal beams of the deck and roof are of similar size. At the supports, the deck is rigidly connected to concrete columns. At this stage, the foundations were admitted as direct. The bridge will use steel (S355J2G2) and wood deck (C16). The vibration control is demanding on a pedestrian bridge and peak acceleration values were checked against reference values for comfort.

##### BIO

Não existe bio em EN





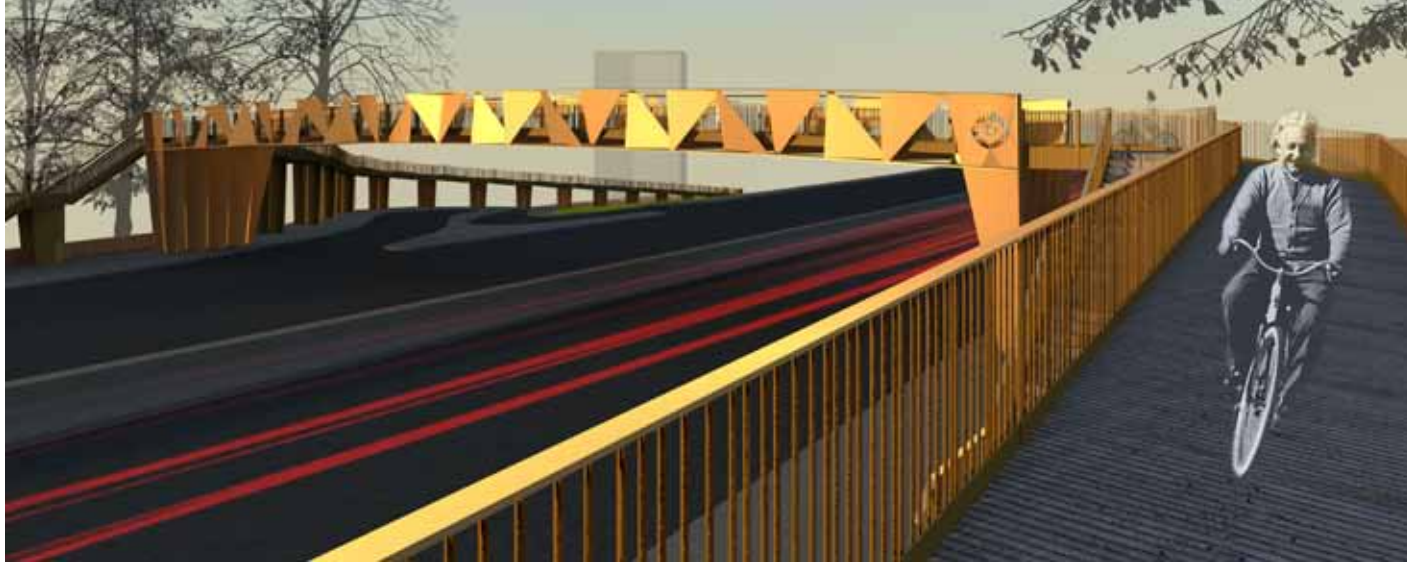
#### NUNO BRANDÃO COSTA, ARQUITECTO UNIPessoal (PT)

##### ABSTRACT

A bridge is an urban object strongly connected and meaningful. An element, almost a sculpture, but essentially structural: a piece of art. It's a passage, a path, a crossover a physical object, a dynamic elevation to be walked through. It has three essential moments: the climb, the crossing and the descent. With this assumption and connecting the bridge to the landscape, three independent objects were drawn. Each one of them has an architectural answer to the three functions that were written above: a slab with a minimum thickness, supported by steel columns, a "U" steel structure to overcome the void and to cross the road, a compact ramp with ends the south slope and makes the connection between the bridge and the urban surroundings. The object is the geometry explained on the way that the three structural elements are connected: in a tangent and almost misunderstood way.

##### BIO

Não existe bio em EN



## OBS ARQUITECTOS (MO)

### ABSTRACT

#### THIS IS NOT A BRIDGE

Following the sustainable green structure envisioned by the landscape architect Gonçalo Ribeiro Telles, mentor of the Lisbon Green Corridor since 1976, this project is less a bridge and more of a conceptual endeavour to materialize the vision of a man whose main concern was to merge human activity with nature's prepotent character through the art of landscaping. Facing the unstoppable expansion of the urban fabric much of the designer's work nowadays has to do with human dwelling and its surrounding environment — may it be an enclosed space (interior) or towards an open ended void (exterior). This particular project is mainly concerned with the latter where the goal of our design is to understand the city commuter as an urban explorer, in which the daily route is transformed into a site-specific trail designed to experience different environmental intensities.

#### SENSING THE ENVIRONMENT

Environmental Texture Mapping (see panel) is the translation of the trail into visual terms: Rustic Wall is the start/ending point located in Telheiras, with a unique appearance this wall has different stratifications of its composition which gives us a sense of meaning and place to a previous rural site; Industrial Park has an unpleasant scenery which is why the ramp begins before reaching it in order to avoid facing it; Bridge is the climax of the trail where the structural plates are positioned in such way to visually translate the dynamics of the highway, as an active sculptural presence in the urban fabric; Green Barrier is the zone where the existent platan trees are located which brings a different scent of air to the pedestrian promenade; Torres de Lisboa start/ending point is reached through a long slope exclusive to the urban riders, this path may be with a slightly hard inclination for those who are climbing but the landing which are spaced every six meters allow the commuter to catch the air.

#### STRUCTURAL PERFORMANCE

In terms of functionality, our approach to the structure was to create the lowest clearance height that supports the slab which constitutes the cycling and pedestrian lanes. For that matter, in order to overcome the forty-two meter span we transferred the gravitational load of the bridge to the sides; in other words the balustrade, made of three centimetres steel plates, is performing as a structure instead of being just for safety reasons. Hence, structure, ornament and performance are all from a unison design principle, which is to reduce every effort to its essence. As a chain of events, we may understand the equation as the following: a light system will allow the lowest clearance height from the highway, therefore, enabling the presence of fewer ramps and lesser the gradient (degree of inclination or the rate of ascent or decent of the length of a trail) needed for each one of them.

#### LANES BY THEIR OWN RIGHTS

The trail is designed to comprise two separate lanes, the bicycle one and the pedestrian one. This is due to the fact of the need to articulate the trail with the main transport system, the bus stop located with the number 7 of the left panel, and other existent pedestrian routes such as the flight of stairs that facilitate direct access to Torres de Lisboa. The accessibility to the disabled is envisioned on the bicycle lane, nevertheless, the contrast of both velocities is foreseen by a suitable width (two meters and forty five centimetres wide), which enables the two opposite directions to coexist on the same lane and may comfortably comprise both modes of transportation (where cyclists may ride without having to dismount), just like on the road there coexist many different kinds of vehicles. At the same time, concerning the special level of accessibility, the surface of both bicycle and pedestrian lanes are designed to be hard and non-slippery.

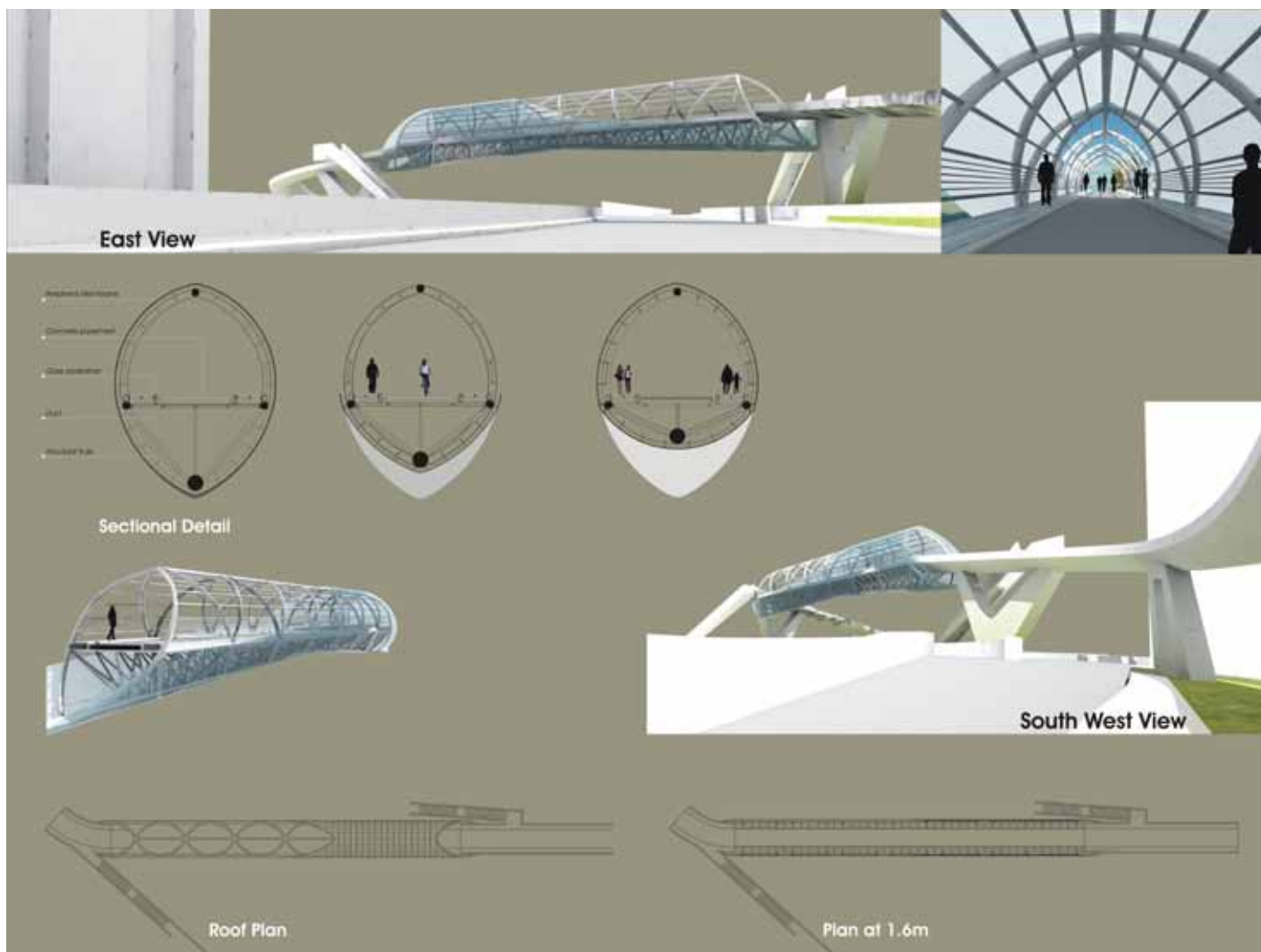
#### ELECTRICAL AND MECHANICAL EFFICIENCY

In terms of structure the bridge is envisioned to facilitate the natural migration of the rainwater — to its sides through a two percent of inclination and thereon to the both ends through a three percent of inclination — to a water collector located in specific points on the level of the foundation of the steel columns to feed the watering of the adjacent public lawns.

Illumination is foreseen for public night safety of the trail course, which is turned on with motion detector devices located on each end of both lanes.

### BIO

O.BS architects is a contemporary Portuguese architecture firm, established in Macau under the direction of its founders architects António Bruno Soares and Irene Ó since 1979, handling building development projects and interior design from feasibility studies to construction. Presently the firm integrates the successors of its founders, architects Maria Bruno Soares and João Ó, who joined the firm in 2006 and 2003 respectively. In 1992, the firm was awarded the AAM - Macau Renovation Award for designing the Macau Monetary Authority building (St. Rafael) and in 1993, award for the renovation of the Bela Vista Hotel and for the design of a private house in Barra Hill. The practice is supported externally for all the services in structural engineering, building services, mechanical and electrical by local offices. During its thirty years of practice the firm has designed more than 100 buildings, including government and offices buildings, private residences, heritage renovations, industrial buildings, and participated in major design competitions being awarded the first prize and design contract for the Cultural Center, Banco Nacional Ultramarino (BNU), and United Nations Software Institute in Macau.



## OLI MAHMUD ARCHITECTS (BD)

### ABSTRACT

#### Conceito:

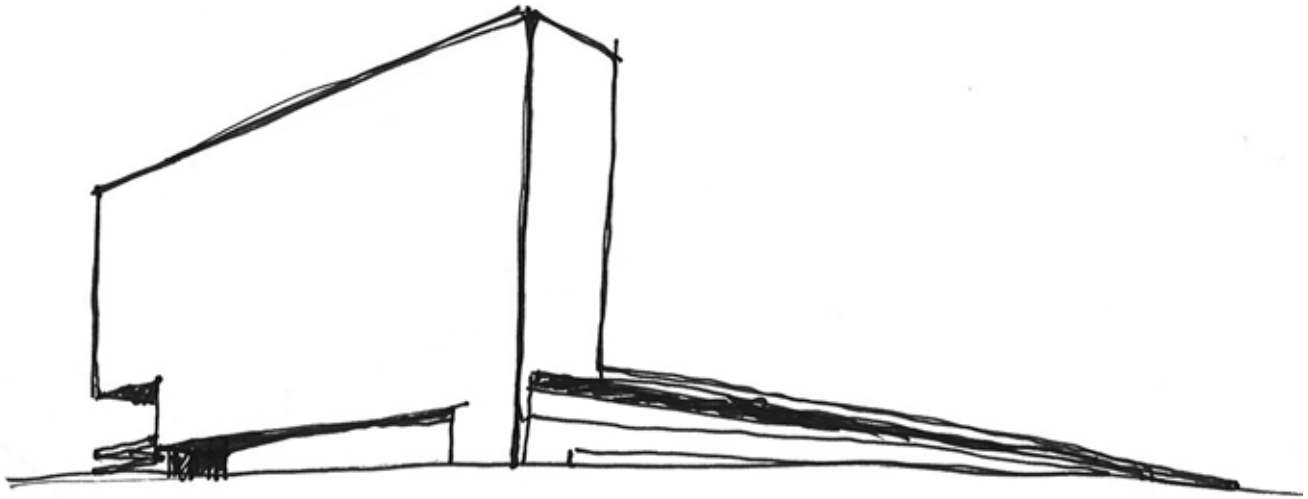
Projectar uma ponte que exista para além da sua função.

#### Descrição:

A estratégia basilar do projecto era criar um ambiente urbano orientado para a ponte. A aproximação da rampa inserida na paisagem projectada a partir dos dois lados da via prepara naturalmente o acesso à ponte principal. Isso permitiria uma maior circulação pedonal, bem como criaria um espaço público para conversas casuais, passeios ou simplesmente passar o tempo, avistando da ponte o bairro vizinho. A rampa de acesso está apoiada em pilares de betão e tem um tabuleiro também em betão. Em ambos os lados da via existe uma estrutura tubular de aço, em treliça e em consola. Armações horizontalmente distribuídas em intervalos regulares unem a estrutura principal, dando uma forma tubular à ponte. As armações inferiores, à altura do peão, estão equipadas com guarda de vidro. No tabuleiro principal o vidro é utilizado no pavimento da zona de actividade pedonal em ambos os sentidos, e o betão é usado no centro para andar de bicicleta. A membrana externa da ponte tubular está parcialmente coberta por um painel de vidro que lhe confere uma forma arredondada em ambas as extremidades e está equipada com células fotovoltaicas policristalinas aplicadas aleatoriamente e com um sistema de iluminação LED. Esta instalação acumula a luz do dia, iluminando o local à noite com diferentes mostras digitais. Deve funcionar como uma ponte de divulgação dos media durante a noite, celebrando o processo de regeneração urbana da zona.

### BIO

Oli Mahmud Architects foi fundado em 2006 por Oli Mahmud (1978, Bangladesh), licenciado na Khulna University em 2002, na disciplina de Arquitectura. Em pouco tempo o atelier foi encarregue de elaborar uma série de projectos de arquitectura e planeamento no Bangladesh. O Indigenous Training Institute (Instituto de Treino Indígena) em Rajshahi é um impressionante projecto em construção financiado pela SADC (Swiss Agency for Development and Co-operation). O atelier ganhou o concurso público para a elaboração de um Master Plan para o Savar Defense Officer's Housing Scheme (DOHS) e a proposta apresentada para o BCSIR (Bangladesh Council for Scientific & Industrial Research) está a ser revista pelo Ministério da Ciência e da Tecnologia. O atelier terminará em 2011 o projecto de um complexo de quinze pisos de utilização mista. Está em exposição um projecto para a cidade de Viena no MAK (Museum of Applied Art & Contemporary Art), na Áustria, seleccionado num concurso internacional. A proposta para o Liberation War Museum of Bangladesh foi apresentada no Bangladesh National Museum em 2009.



## OMAR DE GADYT (PT)

### ABSTRACT

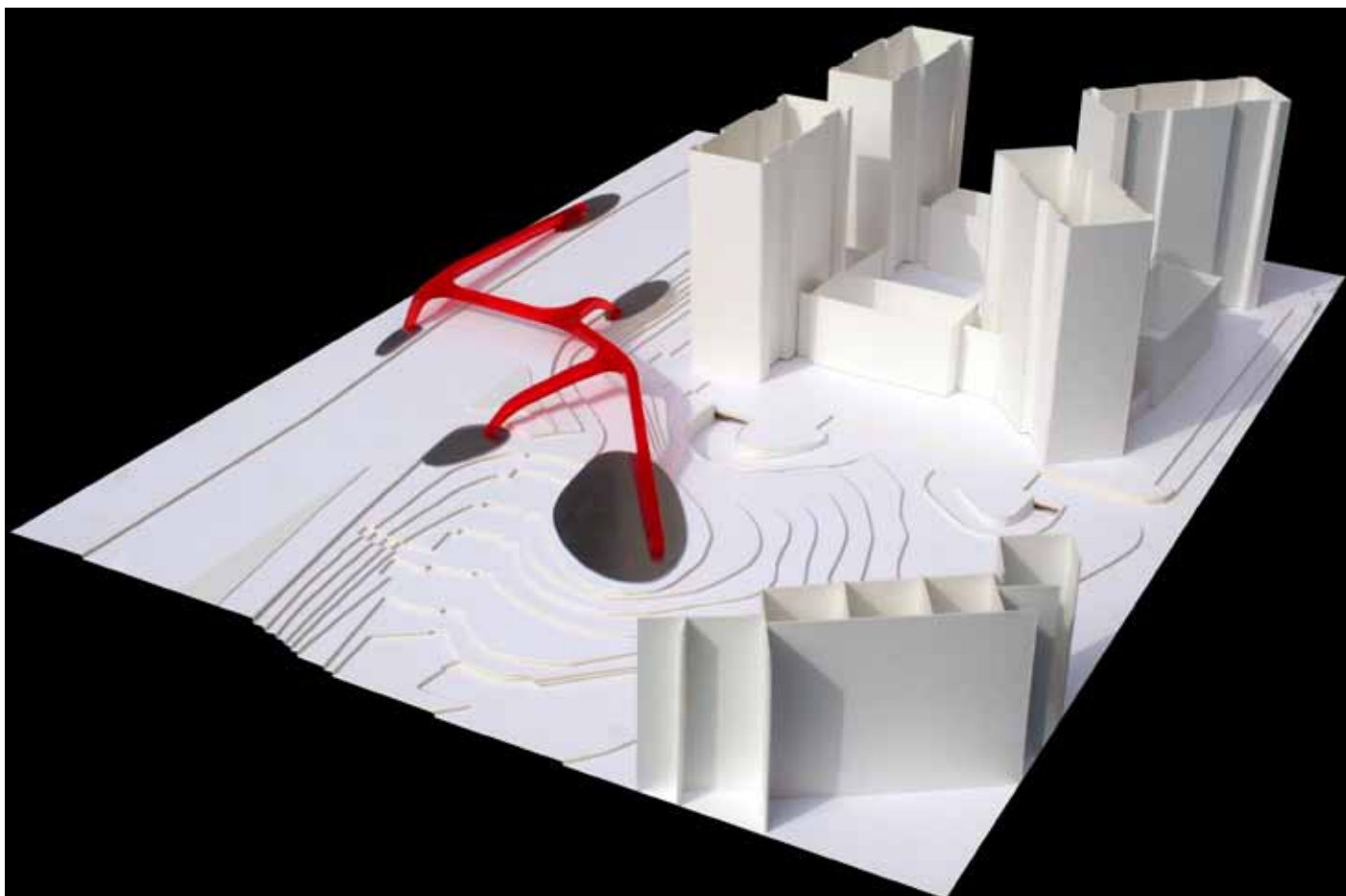
"The bridge lets the stream run its course and at the same time grants their way to mortals so that they may come and go from shore to shore."

Martin Heidegger, *Building Dwelling Thinking*

The proposed bridge assumes an important role in its setting out. On the one hand, it connects the two banks of Segunda Circular, the North and the South. On the other hand, the bridge, intends to be a sort of mark, exploring its vertical space. It's important to react to its surroundings by giving some continuity to the existing constructive mass, as Lisbon Towers and Colombo Towers. From the South side one can access the crossing level by a longitudinal ramp facing Lisbon Towers. All accesses are available to pedestrians, bicycles and disabled people. The crossing space is characterized for being an spanned internal space with 3 key zenital openings that work together with the sunlight to give a different atmosphere depending on the time of the day. The access to the North bank is made by a circular ramp where one can look far and beyond at 360-degree. The way that the vertical space is defined is by creating a water deposit. The deposit intends to collect the rainwater and to store it for the Lisbon's council use. It's proposed that the stored water could be used to water the existing green spaces held by the municipality. The deposit consists on the collection of the rainwater, on its filtration and on its storage. Due to its vertical character the deposit system can work by gravity, saving energy costs on pumping the water on a mechanical way. It's intended that all the materials used on the construction of the bridge could be recycled or reused materials from other building sites, such as recycled concrete, reused steel, etc.

### BIO

Omar de Gadyt was born in Lisbon, Portugal, in 1980. He studied at Universidade Lusiada de Lisboa and graduated in 2006. He's been a member of Ordem dos Arquitectos since 2007. After a collaboration of two years in three offices in Lisbon he moved to London, U.K., where he worked for two award winning architectural offices, managing a total of half a billion pounds budget projects. He has been involved in several international competitions in Austria, United States, Portugal and Mozambique.



# PAULA SANTOS – ARQUITECTURA, SOCIEDADE UNIPESSOAL (PT)

## ABSTRACT

A pedestrian and cycling bridge to be located on a “heavy” and “hard” environment.

Heaviness and hardness require lightness and softness:

A bridge being a suspended structure.

A dismembered environment calls for a unifying project - A bridge like a body.

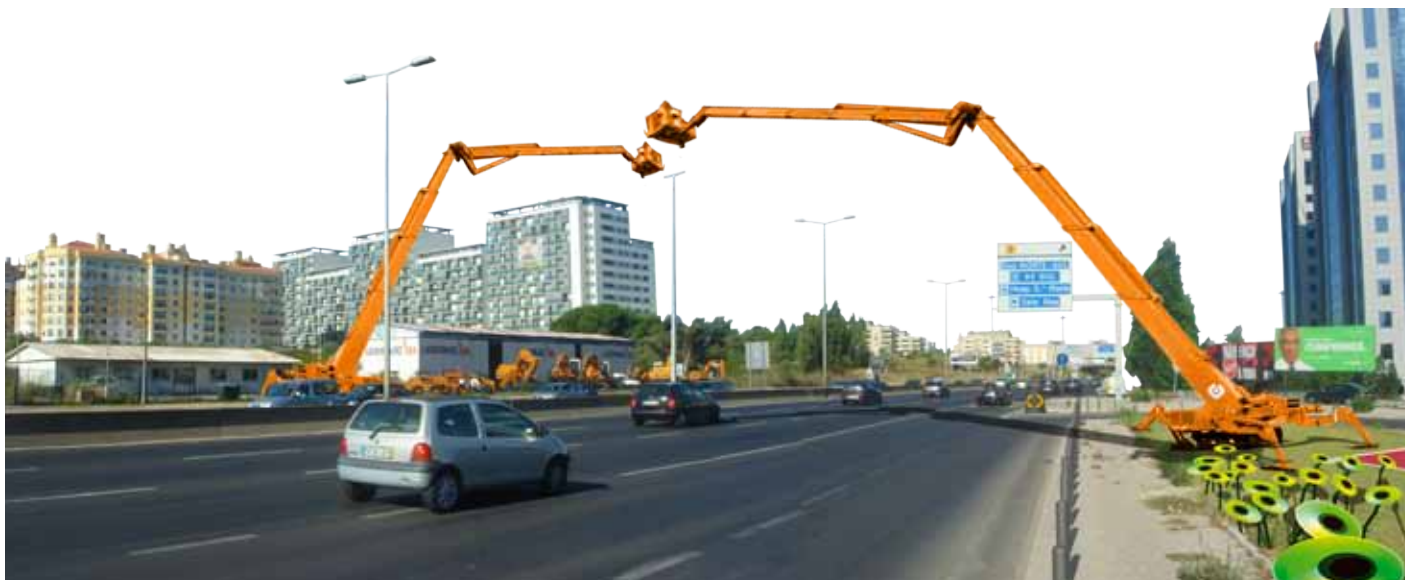
A bridge for pedestrians and cyclists to crossover a highway - A bridge “moving”, like an organic body.

Stairs and ramps like members stretching along large curves and touching the ground, inside small circular plazas with solar lamps and benches, also serving as resting areas. The lights are lateral lines of LED lights. Structural elements are in concrete with naturalistic engravings on the outside, and coloured inside. A prestressed concrete box beam, with variable width and constant height, with parapets that increase its rigidity. Concrete ramps and staircases. Steel circular hollow sections in columns. A rather complex structural behaviour of a continuous and branched beam bending over inclined supports. An “equivalent arch effect” is slightly mobilized.

## BIO

Não existe bio em EN





## **PEDRO BARATA FERNANDES GOMES DE CASTRO (PT)**

### **ABSTRACT**

Não existe abstract em EN

### **BIO**

José Martins (Guimarães, 1981)

Began his academic journey in 1999 at Escola Superior Artística do Porto, and moved to Faculdade de Arquitectura da Universidade do Porto in 2002. Between November 2006 and April 2007 he made his internship in Amsterdam (Holland), in De Architekten Cie- Architecture & Planning office. Research & Development, participating in different scales/ programs of the design projects. In 2008 he got the degree by FAUP with the thesis “20 anos e uma Unidade” under orientation of Architect Francisco Barata, associated teacher of the Oporto Architecture Faculty UP. At the moment he’s developing a thesis in the Metropolis International Postgraduate Program in Universitat Politècnica de Catalunya, under orientation of Xavier Costa, architect (UPC) and PhD (University of Pennsylvania).

Pedro Barata (Oporto, 1980)

Architect (FAUP, 2006), Master architect in architecture and urban culture (Metropolis Master, CCCB/UPC, 2008) and PhD researcher at FAUP (2009 - ). Co-editor of the Unidade 7 magazine (FAUP, 2008). Prized in several national and international competitions, has been invited to publish, exhibit and present his work in Portugal, Spain, Italy, Austria and England.



## PEDRA SILVA ARQUITECTO – LUÍS PEDRA SILVA (PT)

### ABSTRACT

The cross point between two contrasting realities blended by a structure designed to serve a purpose. An intersection of two different paradigms: one intimate from the cyclist and pedestrian perspective, the other voyeuristic from the passing vehicles. This contrast of speed and perception was a basis of reflection and analysis. To design an object that is perceived in seconds from the outside and minutes on the inside? The blending of two opposite poles. For the moving vehicle, this element needs to be represented as one unique piece. Lets not be concerned with the small detail because they move too fast to notice. Motorists will need the object to speak to them and interact with their moving point of view. The object responds to this in a number of ways. It twists and blends the two paradigms together. It juts out and balances outwards replicating movement and defying gravity. During the day it is pragmatic and resilient while at night it reveals its bohemian side, streaking light across the motorway. The cyclists and pedestrians experience the object from within, while getting to their destination. It relates to them in a more intimate and tactile way, protecting them from the moving traffic below. The twisting sides provide selective views of the surrounding area, by revealing and concealing perspectives. Here scale of detail is important, they are perceived from a short distance within a slower timeframe. We wanted the space within the bridge to be close to people, being more organic and protected - to create the snugness of a cocoon, so we clad the floors and walls in wood, providing a continuous texture that flows with the bridge. The internal edges are lined with light accentuating perspective and motion. During the day the exterior of the object is clad by a robust material that faces onto unforgiving surroundings, while at night its permeability allows its orange interior to light up, giving it a glowing form. Function defined form, allowing the shortest possible crossing distance at recommended angles allowing for efficient use and comfort. Sustainability in careful selection of materials, limited maintenance and the use of renewable energy will make this crossing a landmark jewel in Lisbon's urban landscape.

### BIO

Pedra Silva Arquitectos, Lda

Established in 2003 by Luís Pedra Silva.

Luís Pedra Silva was born in Johannesburg, South Africa and went to Portugal to study architecture in 1991. He graduated from the Faculty of Architecture in Lisbon (FAUTL) in 1996 having also studied through exchange programs at the Faculty of Architecture at the Witwatersrand University in South Africa and at the Faculty of Architecture in San Sebastian, Basque Country in Spain. In 2002 started a Masters in Construction at the Civil Engineering University (IST) in Lisbon. He founded Pedra Silva Architects in March 2003.

André Góis was born in Beja in 1981, Portugal. He graduated from the Faculty of Architecture in Lisbon (FAUTL) in 2006 and has worked as a freelancer in the new media field with focus on audio, web design, 3d design and interactive media. He has been working with Pedra Silva Architects since February 2006.

Hugo Ramos was born in Cologne, Germany 1976. He graduated from the Faculty of Architecture at the Lusíada University in Lisbon in 2005. He has been working with Pedra Silva Architects since March 2006.

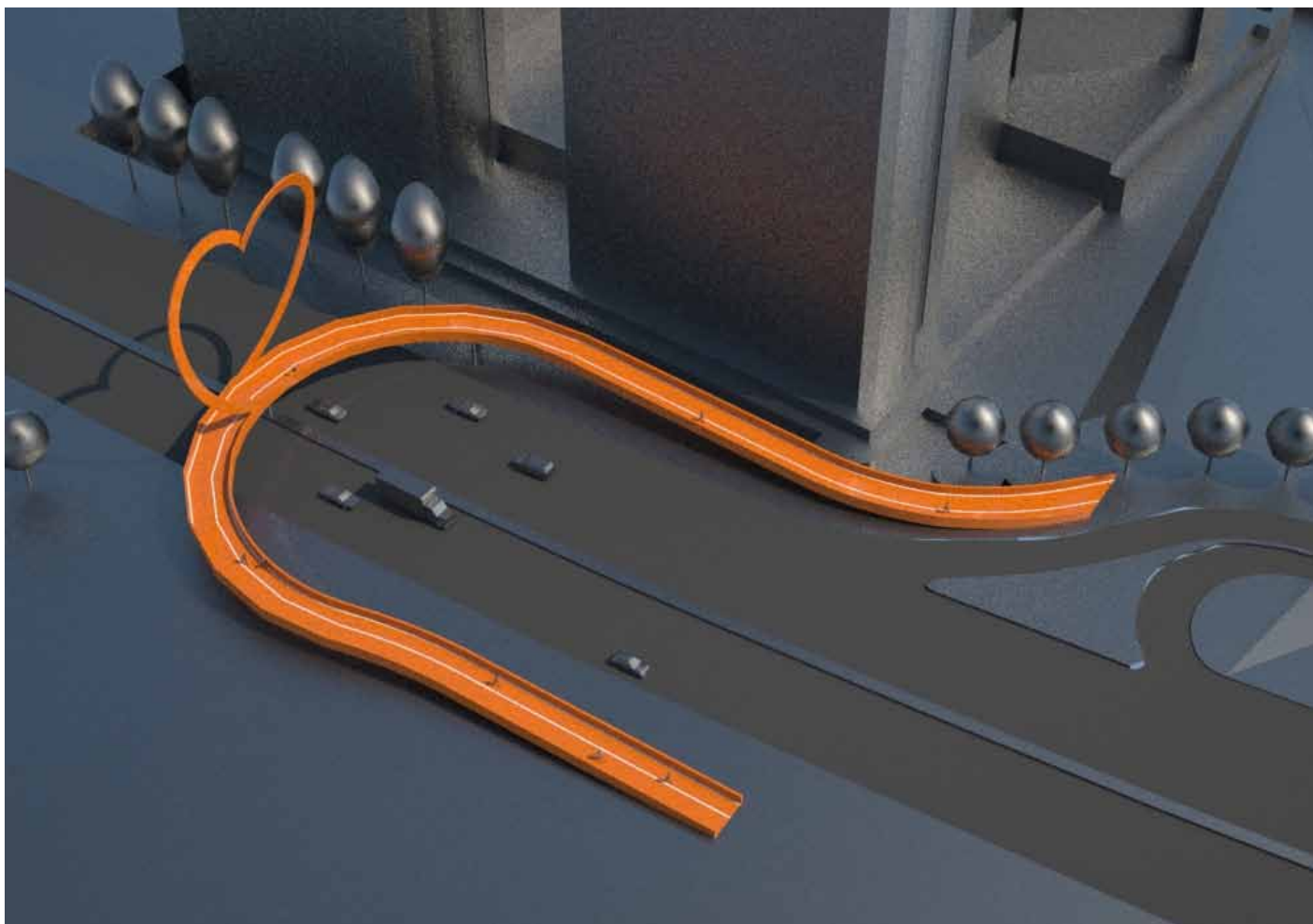
Jette Fyhn was born in Grindsted, Denmark in 1976. In 1998 she started her degree in the Aarhus school of Architecture and had a sabbatical in 2000 where she worked for bquadrado, a Portuguese architect firm situated in Oeiras. Graduated in 2004 from the department of Interior architecture and furniture. She has been working with Pedra Silva Architects since 2006.

Dina Castro was born in Lisbon in 1978, Portugal. She graduated from the Faculty of Architecture in Lisbon Lusíada University in 2002. She finished a post graduation in sustainable construction in 2003. She has worked in leading architectural offices in London and has been working with Pedra Silva Architects since April 2009.

Ana Lúcia Cruz was born in Lisbon in 1983, Portugal. She graduated from the Faculty of Architecture at the Technical University of Lisbon in 2007. She did an internship with Labb Arquitectura SL in Barcelona, Spain in 2007. Was awarded 2nd place in International Competition "Dubai 2A Magazine International Competition and has been working with Pedra Silva Architects since April 2009.

Ricardo Sousa and was born in Lisbon in 1978, Portugal. Graduated from the Faculty of Architecture in Lisbon Moderna University in 2008. Did an internship with WMA Willy Muller Architects in Barcelona, Spain in 2004. Has been working with Pedra Silva Architects since April 2009.

Ermelinda Palma was born in Lisbon in 1956, Portugal. Having worked with leading companies in the editorial and media world, TAP and in accounting firms. Joined Pedra Silva Architects in June 2008. And works in the administration area.



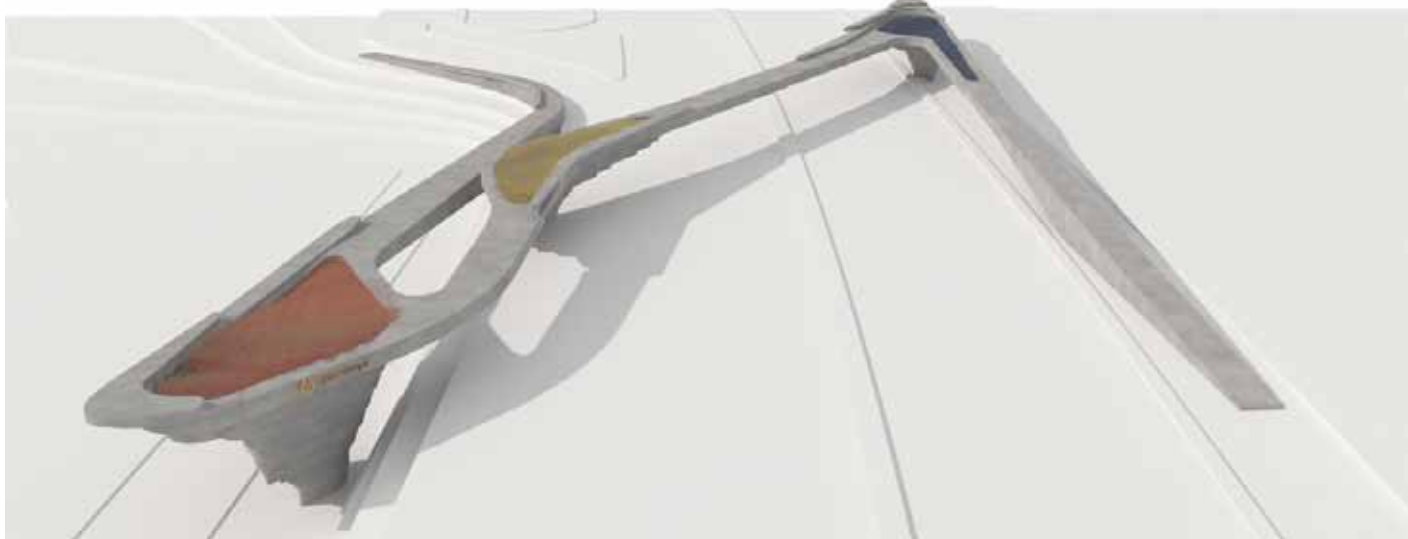
## PEDRO PIMENTEL (PT)

### ABSTRACT

We really don't need another bridge. Neighbourhood infrastructure tunnel could provide the necessary crossing. What we need in fact is an urban landmark, contextualized, that can transform in spiritual energy, emotional, the impossibility of strictly technological energetic apparel. The challenge is now to measure the range of this conciliatory image, unexpected, ironic and positive.

### BIO

Born in Oporto in 1958. M.Arch in Architecture by FAUTL in 1985. Collaborates with architect Rui Pimentel between 1982 and 1986. Taught at Eça de Queirós and Carolina Michaelis High Schools between 1987 and 1991. Drawing and Architectural Project teacher at ESAP College between 1988 and 2005. Has his own architectural practice in Oporto since 1987. The vast project and construction experience in several domains, scales and typologies extends to the participation in public architecture and urbanism competitions: 1st prize - Design / Construction competition for a bridge in Aveiro, Portugal; 1st prize - Design/ Construction competition for a drawbridge and control building in the Pyramids channel in Aveiro, Portugal



**RAIMUNDO GOMES (PT)**

**ABSTRACT**

PASS(e)AR to walk instead of passing by  
What if PASSING BY could BE MUCH MORE?  
What if a bridge could bring NATURE to us?  
What if the Men could feel TIME again?  
Could a bridge be able to grow like the ORGANOLOGY of a flower?  
Could its feet be GARDENS?  
What if a RED GARDEN invited us TO OBSERVE?  
What if a YELLOW GARDEN made us BREATHE?  
What if a BLUE GARDEN enable us TO MEDITATE?  
Could a bridge stand against a materialistic world  
Will we be able to recover the REAL TIME OF THINGS?  
It's about TIME!  
It's about FELLING!  
It's about to be able to WALK, where you only need to pass by!

**BIO**

Não existe bio em EN



**RITA DE ARAGÃO DA ROCHA PEIXOTO CAMEIRA (IT)**

#### ABSTRACT

This project is not just a bridge design, but also a system that intends to encourage walking and biking. We have designed a network, which connects the new bridge with bike paths (existing and new) and a bicycle parking area. The project's major purpose is to develop a system, which integrates an ecological mobility urbanism with the use of renewable energies and foster a new social and environmental responsibility. After a first observation, comes out that the bridge's area is under the shade of the Torres de Lisboa during the morning for most of the year, unlike the south-east wing, where we have located the bicycle parking. Having that in mind, we placed wind turbines along the bridge that function the entire year attending to Lisbon's wind direction and power and installed a photovoltaic flat-plate module set on the bike parking, showing two different forms of producing energy. These combined technologies network is used for lighting but foremost to inform the population. The world is changing and each one has to do his part to make it real, using bicycles, walking and following the advices showed on the LCD information panels on the bridge and on the photovoltaic flat-plates backs (on one face we have the photovoltaic module and on the other the info screen, the system stores daylight energy providing it to the LCD during the night-time). The stored energy can even be used to charge the batteries of the electrical bicycles. Regarding the design of this system, it is intended that in one gesture, it connects parking, bike paths and the new bridge. This plan rises above the existing sidewalk supported by reinforced concrete bearing walls clad with rock climbing walls thus to have the sensation of being suspended over the vegetation. We have opted for designing the bridge diagonally to the 2° circular, and not perpendicularly, giving more fluidity and comfort to the access of the bridge, that is accessible by ramp, stairs and elevator enabling the use by persons affected by low-mobility issues. The bridge's parapet the is an aluminium mesh that allows the wind to pass through and its height gradually increases as the bridge rises (increment of danger equals increment of safety measures) up to being transformed into a roofed passage. This parapet is extended to the parking area, identifying the system.

#### BIO

ContiCameira is an architecture studio founded by Filippo Conti e Rita de Aragão Cameira (May'09), established in Foligno (IT) and Viana do Castelo (PT). It develops projects for the realization, recuperation and rehabilitation of housing and commerce buildings both in Italy and Portugal, relying on the collaboration of the engineer Walter Cecchini. Filippo Conti graduated in architecture at Facoltà di Architettura di Ferrara on March'08 (Erasmus at Faculdade de Arquitectura da Universidade do Porto 05-'06).

Rita de Aragão Cameira graduated in architecture at Faculdade de Arquitectura da Universidade do Porto on July'06 (Erasmus at Facoltà di Architettura di Ferrara 04-'05).

Walter Cecchini graduated in engineering at Facoltà di Ingegneria di Perugia on November'08.





**RUI ISRAEL ARAÚJO DE OLIVEIRA (PT)**

#### ABSTRACT

It is intended with this proposal, not only to respond to the request, but also to show the promoters new elements, new forms of business, and also a synonym of income. “It’s About Time” to connect all the spaces with the city, instead of creating another gap between them. In this proposal, I try to duplicate the spaces used, giving another versatility and potentiality to the proposal. It can also be a great way to implement new forms of business in the area and the city itself, without losing the relation to the subject. New elements appear in the proposal to create a shape of the space around the bridge, giving it the possibility to have an atmosphere of intimacy and to implement a new dimension of the surrounding space. The skin, for example, is composed by different technological components, working together to assure the sustainability of the proposal. The rain provides enough water to be used in different ways, but most importantly, to provide water to the facilities of Galp Energy Foundation towers. It can also work as an outdoor, giving the opportunity to the promoter to get back some of the initial investment. The “light beam”, or track, is the only element that provides light to the space and to the exterior, giving a great atmosphere to the surroundings. An adjacent area will be created for the users to socialize, as any other public building should provide. This area is capable of assuming different forms, such as events, exhibitions, café... In the proposal, all the elements are 100% recycled, giving this element the possibility to be something else in the future, because what is true today might not be true tomorrow.

#### BIO

Rui Israel was born in Famalicão in 1981. He graduated in Architecture by University Lusíada of Oporto in 2004. Has worked in different markets, national and international, between 2004 and 2008, at Plaren and Blå Arkitektur Landskap, to be more precise. He is currently working in some independent projects and collaborates with a few national offices. He often participates in national and international competitions.



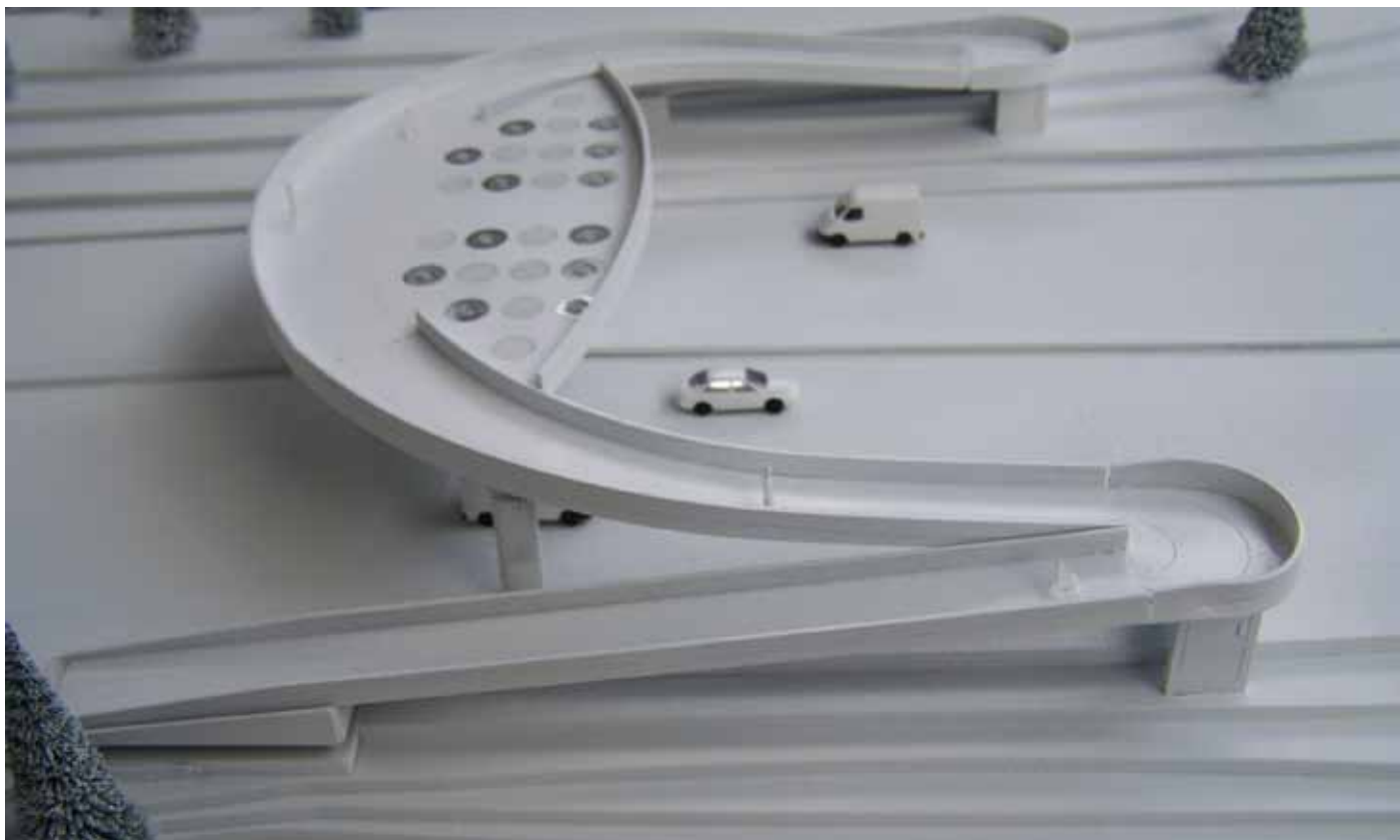
## SNORD, DESIGN, LDA. (PT)

### ABSTRACT

In a clear intention to rise this challenge from a simple urban equipment, this bridge introduces a new architectural element in the city. In this perspective, the surroundings where the construction is placed is intentionally broken by this object of sculptural character and mainly monochromatic, an element that stands out in this visually noisy and expressionless habitat. From this beginning, the idea ruled over function and had its essence and structural beginning in the centipede movement and its harmonious morphology. It describes its complex movement systems, which are balanced and precise. Lightness, balance and precision were, therefore, the guidelines for this conception of movement that, inspired in nature, imitates it by elevating the surrounding urban space. This movement is described around the back of the bridge, which embodies the passageway, symmetrically lifted by two structures in catenaries opposed by rigid crossbeams. This morphological “skeleton” plastically identifies the object and is its architectural representation, which hold it up. But the peculiarity of this architectural piece does not satisfy itself with the look. The experience that it provides also has a purpose. The accesses, constituted by two “cocoon”, half-emptied and with access ramps to the main deck in its interior, are covered by a partially translucent metal “skin” that allows the creation of sensory environments. In energetic terms, the bridge will be sustained by a system of photovoltaic panels installed in the access cocoons, which guarantees the electric supply of the sound and lighting system, a low consumption LEDS systems. The sustainability of this conception also stretches out to the nature of the materials equated for the construction. A sustainable conception and an intentional symbiosis between nature and ingenuity characterize this new equipment in the city, fully of an aesthetic sense and of pure harmony.

### BIO

Founded in 2006, Snord - Supernormal Design - is a design company focused on developing innovative projects in the areas of product design, packaging, branding and communication design, architectural and interior design. 5 areas as diverse as complementary, whose integration in each project seeks to raise the normal everyday brands, spaces, objects, products and services, to their SuperNormal condition, where the design is driven by innovation, to deliver a unique experience intended to be ExtraOrdinary.



## SULEIMAN ALHADIDI ARCHITECTS (MUTATION STUDIO) (JO)

### ABSTRACT

Integration with the urban context:

Lisbon is considered one of the largest urban centres in Western Europe. A Cycling and pedestrian bridge will be installed in a recognized urban area in Lisbon, over the 2a Circular between Torres de Lisboa and Telheiras to encourage the increase in use of bicycles in a city of 2.8 million inhabitants. The circular Design will introduce a dynamic flow over Torres de Lisboa. The new Landmark will add a contemporary architectural monument to the energetic urban area.

Architecture Concept:

The playful design solutions embody the life and character of the City of Lisbon. It will Integrate Art and Engineering in Public Infrastructure. A dynamic shift with circular ramps will hold the flow of the people and will create a new vision for these types of bridges. The design consciously features and mitigates specific geometric Proportions. The Bridge consists of: the base, which holds the company - Galp - theme with the grooving sign and the orange colour that will stick in the human perception; bike parking underneath; ramps divided in width -- 1.5m for pedestrian, 1.5m for cycling and 0.7m for standing people; walls and handrails, which will vary in height, creating dynamic visionary connections between the people and the urban context; an upper Plaza: to introduce a new vision and create a landmark project; skylights over the 2a Circular; lighting elements along the ramps, which will create another look for the bridge at night.

Concrete was selected as the most practical and economical material for a bridge of this size and configuration. The entire bridge project is built in this material using many standard construction items to display a wide range of capabilities in mixing, forming, and treating the material for aesthetic purpose, with combination of pre-cast and cast in place elements. The new design will contain photovoltaic cells in the skylights, which will help generate the electricity used for the bridge lighting at night.

### BIO

Suleiman Alhadidi is an architect, an artist, a writer and a critic. He is currently working on design experiments and research at Mutation studio besides teaching at the German Jordanian University, Furthermore he is a professional visitor to Petra University in Jordan. He worked with "Laceco international" in Lebanon and afterward worked with Coop Himmelblau in Vienna, Austria. During 2007-2010, he won a number of competitions including: • IIDA "Green design", Korea. WAC award-Royal botanic garden -visitor complex and winter garden- Jordan, • AEEA international competition, present Architecture challenges. • Second Prize in "The state of Kuwait embassy in Amman/Jordan". • RIBA award (architects for health), "back to life- Tal al Rumman recreation complex". • And two academic awards.

Mutation Studio

Initiated By Suleiman Alhadidi in 2008. "Mutation studio" is dedicated to researching issues of design manipulation in structure, form, space, human perception, materials and related technologies including science. Mutation is a place to research and experiment. It solves the rigid ideas in architecture thinking. It creates a wide range for architects and young thinkers to implement their ideas.



**TIAGO BARROS + JORGE PEREIRA (PT)**

#### ABSTRACT

The Cross-Wind Bridge promotes the notion of a multipurpose envelope, which is engineered to capture the wind power from a network of 2,188 lightweight rotating panels. Drivers who pass below the bridge contribute to its ecosystem by increasing the wind velocity by up to 20%, and thus optimizing the rotation of the panels. The induction power system exchanges wind energy through an electromagnetic band located on each panel. The result is a power source that is used to light the bridge at night. During this cycle, a driver plays the role of an active, generative agent. In return, the bridge acts as a responsive “urban chandelier” visualizing the productive elements that produce its inner light. The oblique angles of the bridge’s path are oriented towards, and optimized, for the predominant wind direction. They combine with a surgical urban approach to funnel pedestrians and bikers onto its 40-meter diagonal span over the Segunda Circular Highway. The selected Southwest / Northeast direction is also a consequence of reconnecting and making accessible the remaining paths of Maria Droste Vila split by the Segunda Circular highway and engulfed by Telheira’s residential park. In this context, the bridge will play a formative role in magnetizing sustainable development and turning rural fragments into sources for public green space. The Northwest pedestrian stairs are aligned with an existent boulevard from the Maria Droste Vila and deploys to the future roundabout, located on the Southwest, just next to Galp Energia Headquarters. The cycling arm of the Cross-Wind Bridge is structurally balanced above and below the pedestrian bridge. It forms a ‘Z’ shape, suggesting the motif of an energetic bike path that links Monsanto in the Southwest side of the city with Campo-Grande in the Northeast side of the city. 35% of the punctured membrane forming bridge cladding is made of recycled steel from the auto industry. The structure is based on a truss system, reinforced at the edges, and balanced by concrete stairs and footings.

#### BIO

Tiago Barros and Jorge Pereira met while doing the Masters in Advanced Architectural Design at Columbia University in 2007/2008. From there, and being the only two Portuguese architects studying there at the time, they became friends and shared continuous discussions about critical thinking in Architecture and constant research and questioning of the modus operandi of living experiences. Tiago is currently the CEO of Simply Rhino Portugal and he has worked with Aedas in London, Davis Brody Bond in New York and Aires Mateus in Portugal. Jorge is currently working for Diller Scofidio and Renfro in New York and he has previously worked at nARCHITECTS and Skidmore Owings and Merrill.





## VELHO SAREEN PARTNERSHIP (IN)

### ABSTRACT

Architecture is, in part, a symbolic art. It is essentially the dream of a generation expressed in space. Patrons have always played an important role in nurturing this dream and architects have immortalized this in stone. GALP is a company that deals with petroleum, an essential fuel that powers our lives but with tragic consequences for the environment. As a result, visionary companies are embracing change like never before and accepting clean renewable energy as the future. An oil company associated with clean renewable energy has powerful symbolism. With the design of this bridge we would like to help chart this future for GALP. Wind has a historical attachment to Portugal's past and it could also be a blueprint for its future. It was the understanding of wind that allowed the great navigators of the past to travel far and wide. This element has become the driving force of our design. Our design uses the metaphor of wind and its movement as a starting point. We have incorporated the vector movement of wind; its helical, vortice-like action, and expressed it as the outer lattice structure of the bridge. Each member represents a vector of the wind acting in conjunction with the other vectors to form a composite whole – a visual extravaganza. This formation of different helix structures are a snap shot of the fluid motion of wind. The outer structure, in turn, supports a series of wind turbines. These wind turbines have been designed by Prof. Bill Becker at the University of Illinois and employ revolutionary technology to generate power from wind. The features of these turbines are: noiseless, vibration free, modular, extremely lightweight, power generation in mild wind conditions and difficult to vandalise. They can be perfectly positioned above highways, which are free from wind breakers like trees and other obstructions. This bridge can create a decentralized source of renewable power for the city. If every structure in the future has its own power source, the current model of central power generation can slowly get phased out. We feel that the sustainability should go beyond power generation and hence 80% of the bridge's structure would be made of recyclable material. This bridge will be the symbol of GALP's future. We have designed keeping the patron's best interests in mind while avoiding the pitfalls of cheap gimmickry. It would have been far easier to design a structure from a top-down approach and embellish it with the colours of GALP. In fact, we have avoided this approach all together.

### BIO

Não existe bio





**VITOR MANUEL ALVES SOARES (PT)**

#### ABSTRACT

The bridge has the centre of the circles that identify its shape and passage in the place indicated in the contest's program. The structure has a circular geometrical origin and develops in plant and section in different angles and slopes. It is shaped like an organic structure that is introduced, gains form and develops into the place that it occupies, responding to the light curve of the 2ª Circular. Responding to several realities, this bridge also works as a prompter, a clearly definite point, a circular shape that implies a centre. We propose the use of "GRC" (Glass fibre reinforced cement), which presents advantages regarding reinforced concrete, it has higher resistance to the traction, is lighter, it has bigger durability and is practically maintenance free. The elements in this material will be 3 meters in diameter tubes and 15 centimetres in thickness that point the principal of the structure. The straight elements that in a subsequent phase will be studied will be like a beam in rectangular coffin also with 15 centimetres of thickness are the main part of the structure. In a subsequent construction phase, the structural solution and the costs predicted for this work can be easily controlled. Several elements of this structure are intended to be built in a nearby site, given that it consists in identical tubular elements that are tied forming several pieces of the bridge, and assembled onsite. A set of photovoltaic panels applied on the bridge cables, south orientated, allow energetic autonomy for the operation of the elevators, the lighting, and also to accumulate in batteries. For a subsequent phase it will study the inclusion of openings in the structure. The visual link to Galp Energia is attained through the tubular structure, which somehow represented by the tubular structure, which acts as a metaphor for the pipelines and by the articulated structure of the cables, representing the flow of energy and the networks.

#### BIO

Não existe bio

( e )

AN INITIATIVE  
Galp Energia Foundation

DESIGN DA EXPOSIÇÃO E PRODUÇÃO  
( experimentadesign )

DESIGN GRÁFICO  
Fundação Galp Energia

CONSTRUÇÃO, ILUMINAÇÃO E MONTAGEM  
Cenycet

VINIS  
Luís Jardim

SEGURADORA  
Lusitânia Companhia de Seguros

EQUIPA/TEAM  
Goreti Mourão; Joana Leitão; Renata Candeias



A programação do Palácio Quintela,  
de 16 de Junho 2010 a 16 Junho 2011,  
resulta de uma parceria entre a  
experimentadesign e o IADE.

Os textos são da responsabilidade  
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