

Supporting presentation for
lecturers of Architecture/Civil
Engineering

Chapter 01

Art



Location:
Falkirk, Scotland

Material:
Structural Steel
Cladded with type
316L (S31603)
Stainless Steel

Dimensions:
30 metres high

Weight:
300 tonnes each

Year created:
2013

Andy Scott: The Kelpies ^{1, 2}

Andy Scott: "The original concept of mythical water horses was a valid starting point for the artistic development of the structures. I took that concept and moved with it towards a more equine and contemporary response, shifting from any mythological references towards a socio-historical monument intended to celebrate the horse's role in industry and agriculture as well as the obvious association with the canals as tow horses."



Location:
Brussels, Belgium

Material:
Polished 1.4404 (316L)
stainless steel

Dimensions:
102 meters high with
each of the nine
spheres having a
diameter of 18m

Weight:
2400 tons

Year created:
1958

Design: A. Waterkeyn Architects: A. and J. Polak: Atomium ^{3, 4}

The Atomium was constructed for the 1958 Brussels World Fair. Its nine spheres are connected so that the whole forms the shape of a unit cell of an iron crystal magnified 165 billion times. It was renovated between 2004 and 2006. The renovations included replacing the faded aluminium sheets on the spheres with stainless steel. CNN named it Europe's most bizarre building! It is one of the major attractions of Brussels .



Location:
St. Louis, MO, USA

Material:
AISI 304 Stainless Steel
Cladding

Dimensions:
192m tall

Weight:
4164 tonnes

Year created:
1965

Designer: E. Saarinen Engineer: H. Bandel: Gateway Arch ^{5, 6}

Intended to be “A suitable and permanent public memorial to the men who made possible the western territorial expansion of the United States....”, the gateway Arch in St Louis, MO, USA, is 192m tall, the world’s tallest arch, and has become the symbol of St Louis. The arch weighs 4164T, of which 803T of AISI 304 stainless steel cladding.

**Location:**

Chicago, USA

Material:

Highly polished 316 stainless steel plates

Dimensions:

10 by 20 by 13 m

Weight:

110 tonnes

Year created:

2004

Sir Anish Kapoor: Cloud Gate ^{7, 8}

Cloud Gate is British artist Anish Kapoor's first public outdoor work installed in the United States. The 110-ton elliptical sculpture is forged of a seamless series of highly polished stainless steel plates, which reflect Chicago's famous skyline and the clouds above. A 12-foot-high arch provides a "gate" to the concave chamber beneath the sculpture, inviting visitors to touch its mirror-like surface and see their image reflected back from a variety of perspectives. Inspired by liquid mercury, the sculpture is among the largest of its kind in the world.



Location:
Normandy, France

Material:
2205 and 316L
stainless steel

Dimensions:
9m high

Weight:

Year created:
2004

Anilore Banon: Les Braves ^{9 - 11}

This memorial stands on the beach known as Omaha Beach in the village St. Laurent-sur-Mer in Normandy, France and commemorates the soldiers that fell on the beaches of Normandy on D-Day, June 6, 1944. The memorial was dedicated on June 5 2004, for the 60th anniversary of the landing.

**Location:**

Toledo Museum of Art,
Toledo, OH, USA

Material:

Painted stainless steel

Dimensions:

377 x 235 x 245 cm
each

Weight:**Year created:**

2010

Jaume Plensa: Mirror I and II 12, 13

The principal concept in this piece is that of dialogue. The two figures face one another as if in perpetual, silent conversation. The title, *Mirror*, is the act that the figures perform for one another — standing as reflections of the other’s thoughts and dreams. There is room enough between the two figures for the viewer to stand and “enter” the conversation. The figures are modeled in letters from eight alphabets – Arabic, Chinese, Greek, Hindi, Hebrew, Japanese, Latin and Russian. The artist considers this dialogue and interaction as central to learning, and more importantly to understanding, between people and cultures.

**Location:**

Guggenheim Museo,
Bilbao, Spain

Material:

Bronze, marble, and
stainless steel

Dimensions:

9mx10mx12m

Weight:**Year created:**

1999

Louise Bourgeois: Maman ¹⁴

The title *Maman* enhances dynamic contradictions at the heart of the sculpture. Why the spider? *“Because my best friend was my mother and she was deliberate, clever, patient, soothing, reasonable, dainty, subtle, indispensable, neat, and as useful as a spider. She could also defend herself, and me, by refusing to answer ‘stupid’, inquisitive, embarrassing, personal questions”*



Location:
Helsinki, Finland

Material:
600 Stainless Steel
Tubes

Dimensions:
8.5 m high, 10.5m in
length, and 6.5m in
depth

Weight:
24 tonnes

Year created:
1967

Eila Hiltunen: Sibelius Monument (1967) ¹⁵

The Sibelius Monument in Helsinki, Finland, is dedicated to the Finnish composer Jean Sibelius. Weighing around 24 tonnes, the sculpture is made up of more than 600 stainless steel tubes, welded together in a wave-like formation which resembles the shape of organ pipes.

**Location:**

Oslo, Norway

Material:stainless steel and
glass panels**Dimensions:**

12 by 17 by 16 m

Weight:**Year created:**

2010

Monica Bonvicini: Hun Ligger (She Lies) ¹⁶

It is a permanent installation, floating on the water in the fjord on a concrete platform next to the Oslo Opera House, 12m above the water surface. The sculpture turns on its axis in line with the tide and wind, offering changing experiences through reflections from the water and its transparent surfaces.

**Location:**

Jerusalem

Material:

Polished Stainless Steel

Dimensions:

5m tall and 5m in diameter

Weight:**Year created:**

2010

Sir Anish Kapoor: Turning the world upside down ¹⁷

The stainless steel piece is 5 m tall and 5 m in diameter and flips the whole city of Jerusalem into the sky, signifying the spiritual importance of Jerusalem as a heavenly city.



Location:
Reykjavík, Iceland
Material:
Stainless Steel
Dimensions:
9 m x 18 m x 7 m
Weight:

Year created:
1990

Jon Gunnar Arnason: Sun Voyager ¹⁸

“Sun Voyager is a dreamboat, an ode to the sun. Intrinsicly, it contains within itself the promise of undiscovered territory, a dream of hope, progress and freedom”. The sculpture is located by Sæbraut, by the sea in the centre of Reykjavík, Iceland.



Location:
Trentham Gardens, UK

Material:
Stainless Steel Wire

Dimensions:

Weight:

Year created:

Robin Wight: Fantasywire ¹⁹

UK sculptor Robin Wight creates dramatic scenes of wind-blown fairies clutching dandelions, clinging to trees, and seemingly suspended in midair, all with densely wrapped forms of stainless steel wire. The artist currently has several pieces on view at the Trentham Gardens.

<http://www.fantasywire.co.uk/>

**Location:**

Tuxtla Gutierrez, Mexico

Material:

Coated Stainless Steel

Dimensions:

48m (62m with the base)

Weight:

2000 tonnes

Year created:

2007

Architect Jaime Latapi Lopez: Cristo de Chiapas ²⁰

The "Cristo de Chiapas" is an impressive cross, which is coated with gold-colored stainless steel accentuating the figure of Christ and shines in the reflection of the lights of the sun.

**Location:**

Versailles, France

Material:

Stainless Steel

Dimensions:

3m x 1.5m x 4m

Weight:**Year created:**

2009

Joana Vasconcelos: Marilyn (2009) ²¹

Marilyn takes the form of an elegant pair of high-heeled sandals, whose enlarged scale results from the use of saucepans and their respective lids. The unlikely yet assertive association between the saucepans and high-heeled sandals, two paradigmatic symbols of Woman's private and public dimensions, proposes a revision of the Feminine in the light of the practices of the contemporary world. The recourse to saucepans, sign to which one would associate the traditional domestic sphere of Woman, in order to reproduce an enormous high-heeled sandal, symbol of beauty and elegance demanded by social conventions, contradicts the impossibility of the dichotomic relation of the Feminine in the domestic and social spheres. The represented object thus emerges as panegyric of the feminine duality, insinuating the full realization of individuality through the subversion of the social norm.

**Location:**

New York, USA

Material:

High chromium stainless steel with transparent color coating

Dimensions:

357 x 218 x 121 cm

Weight:**Year created:**1 of 5 unique versions
1994–2007

Jeff Koons: Sacred Heart Red/Gold ...²²

"....acidly comments on the commercial debasement of emotional and religious experience."

(NY Times)





Location:

Material:

316L Stainless Steel

Dimensions:

71 cm x 41 cm x 41 cm

Weight:

Year created:

Gil Bruvel: Dichotomy ²³

Inspired by the complexities of living fully in all worlds at once, Dichotomy meditates on and celebrates the dual nature of existence. Composed of “ribbons of energy” that seek to capture the process of engaging all levels of being in order to be fully human, the sculpture reflects the natural strength and quiet majesty inherent in integrating the various levels of existence. As a result, the figure inhabits a serene meditative space, fully embracing a dichotomy of existences: anima and animus, male and female, conscious mind and unconscious mind, waking and dreaming.



Location: Charlotte, NC, USA
Material: stainless steel
Dimensions: Height 8m
Weight: Uses 14T of stainless steel
Year created: 2011

David Černý: Metamorphosis ²⁴

The structure is comprised of seven separate layers that rotate intermittently, dissecting the sculpture's features. Custom-written programs control motors embedded within the structure to orchestrate choreographed sequences. Every motor has a feedback switch so the computer knows where each piece is at any given moment, allowing for random motion within the sequences. This movement is controlled via the Internet by David himself and represents a continuation of his work that incorporates mechanical engineering and computers as an integral part of the design. Live streaming video of the sculpture in motion can be viewed online at www.metalmorphosis.tv



Location:
Midway between
Oslo and Trondheim,
Norway
Material:
Polished 316
Stainless Steel
Dimensions:
H: 10.3m
L: 11,5m
Weight:

Year created: 2015

Linda Bakke: The Big Elk ²⁵

The Big Elk, which was designed by Norwegian artist Linda Bakke, stands on the Bjøråa picnic area in Stor-Elvdal municipality midway between Oslo and Trondheim in Norway. This landmark, apart from its being inherently beautiful, is to attract drivers attention and increase road safety as it invites drivers to stop and stretch their legs and rest, thereby combatting fatigue.

The Big Elk has also focused attention on the animals and has become a regional symbol.

Sparebanken Hedmark art fund provided NOK 2 million (207,000 euros) to produce the sculpture.

<http://lindabakke.webs.com/sculptureskulptur.htm>



Location: Paris
Place Augusta
Holmes

Materials:
Stainless steel,
glass and plastic

Dimensions:

Weight:

Year created:
2008

Chen Zhen: La danse de la fontaine émergente ²⁶

The fountain, designed by the French Chinese artist is designed to resemble a dragon winding its way around the square, emerging and submerging from the pavement. The dragon's transparent skin shows the water flowing within.

The fountain is in three parts. An opaque bas-relief dragon appears to emerge from the water-supply plant wall and plunge underground. The transparent second and third parts show the dragon seeming to arch out of the pavement. Water under pressure flows within and is illuminated at night. The fountain was commissioned by the City of Paris in 1999 and inaugurated on February 6, 2008. Although the artist died in 2000, he left sketches showing how the fountain should look like and was completed by Xu Min, the sculptor's spouse and collaborator. The fountain did cost 1,2M€, largely financed by the City of Paris and the Ministry of Culture of France.

Sources: Wikipedia and <https://www.parisladouce.com/2013/03/paris-la-danse-de-la-fontaine-emergente.html>



Location: Barcelona, Spain

Material: stainless steel

Dimensions: H 38m

L: 58m

Weight: unavailable

Year created: 1992

Frank Gehry: The golden fish ²⁷

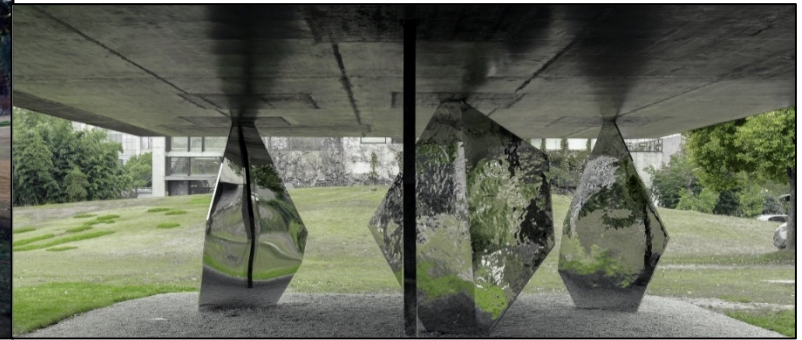
El Peix d'Or is a mesh sculpture in the form of an open-mouthed undulating fish. It is made of stone and steel. Its **copper-colored stainless steel scales** shine under the Mediterranean sun and change appearance depending on the angle of the sun and the current weather conditions, accentuating the organic form of this vast sculpture.

The Golden Fish called El Peix d'Or in Catalan, was designed for Barcelona's 1992 Olympic village and port. The golden coloured steel structure serves as a canopy for the commercial area which links the luxurious Hotel Arts to the seafront near the Olympic Marina. It is one of the best-loved and most striking iconic landmarks on Barcelona's seafront.

<http://www.barcelonaturisme.com/wv3/en/page/1232/peix-fish-frank-gehry.html>



Location: Shanghai, China
Material: stainless steel
Dimensions: H 8m L: 12m
Weight: unavailable
Year created: 2015



Zhan Wang + Atelier Deshaus: Blossom Pavilion ²⁸

The starting point for the project was the stainless steel sculptures of Zhan Wang's [Rockery Series](#), which the artist has been working on since 1995. [Atelier Deshaus](#) reinterpreted these forms as structural elements, aiming to create a pavilion modelled on a rock garden. Six slender rock-shaped columns support a solid steel roof, which is topped by plants and flowers. The reflective columns are arranged randomly, rather than at the most structurally efficient points, to reinforce the idea of a rockery.

<https://www.archdaily.com/792211/blossom-pavilion-atelier-deshaus/5799b693e58ece81bd00004a-blossom-pavilion-atelier-deshaus-photo>



Material: stainless steel
Dimensions: lifesize
Weight: unavailable
Year created: -

Martin Debenham: mermaid 3 ²⁹

British contemporary sculptor [Martin Debenham](#) creates stainless steel wire sculptures inspired by fantasy and nature. Working with a malleable material that has endless potential, the self-taught artist's growing collection of [wire art](#) features impressive structures rendered from intricate twists, bends, and expert welding. Appearing as though they're three-dimensional line drawings, most of Debenham's metal masterpieces are made for outdoor display. When placed into natural environments, they seem to evoke mythical narratives as they glimmer in the sunlight. For example, in one piece, a wire-sculpted mermaid sits on a rock by a lily pond, positioned as though she's contemplating going for a swim. Each strand of wire is sculpted into curves that follow the form of the female body, then flow into a long mermaid tail.

<https://mymodernmet.com/wire-sculptures-martin-debenham/>



Location:

Material:

polished & colored
stainless steel

Dimensions:

3 panels of 1m x 1m
each

Weight:

Year created:

2011

Robert Gahr: Surge ³⁰

Wall Sculpture

Location:

Material:

Dimensions:

2.1m tall

Weight:

Year created:



Ralfonso Karo: #1 Kinetic Wind Sculpture ³¹

25 diamond shaped stainless steel elements connect, self-balance and move independently in the wind. Click [here](#) for video (4':51'')



Location: S. Korea

Materials: painted stainless steel

Dimensions:
273x160x95cm

Weight:

Year created:
2017

NEW 2019!

Sun Hyuk Kim: Forgotten Memory ^{32, 33}

Artist Sun-Hyuk Kim takes inspiration from complex root systems found in nature to construct the human form. Each sculptural figure sprouts a branch or sometimes a small tree, appearing to be some type of human-botanic hybrid. The large, stainless steel sculptures feature fragments of faces, headless bodies, and figures crouching towards the ground as if they are overcome by a great weight on their backs.

Kim's minimalist sculptures allow us to project ourselves onto each of his pieces. They communicate fragility. We all know how it feels to be pulled in different directions and the often-uncomfortable state of growth and change. But in having this knowledge, it connects us together and reminds us that the human experience is vast and ever-changing—just like that of a tree.

And there is a lot more !

<http://www.worldstainless.org/applications/art>

If you have other remarkable works of art in mind, please let us know!



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Thank you!

Test your knowledge of stainless steel here:

<https://www.surveymonkey.com/r/3BVK2X6>