SESSION OVERVIEW

Three design innovators share their cultivated experience working with metal and stone in the landscape through a series of case studies that elaborate on specific techniques, approaches, and inspirations throughout the design process. Detailed explanations from concept through fabrication and installation illuminate creative and complex methods for contemporary landscape design.

Learning Objectives

- Discover techniques and approaches for creating avant-garde metal/stone installations and details with the landscape.
- Learn project design criteria and installation facts and costs.
- Learn collaborative methods used with clients, landscape architects, architects and contractors in regard to metal/stone design.
- Understand the challenges and successes from detailed case studies of a variety of metal/stone applications. Gain insight on how these new approaches can influence the future of landscape infrastructure.
- Learn design processes to create complex metal/stone details through 3D modeling and representation and the ways in which that translates to innovative fabrication.
Shane Coen, ASLA
Coen + Partners

For over twenty years, Shane has led Coen + Partners’ innovative practice, promoting the design vision and aspiration of the studio. As a result of his leadership, creativity, and disciplined design approach, Coen + Partners’ has built a distinguished body of award-winning work. C+P landscapes are influenced by people and place. We collaborate extensively with top and emerging global design talent to create site designs integrating programmatic, architectural, and ecological goals with innovation and beauty.

Mikyoung Kim, FASLA
Mikyoung Kim Design

Mikyoung Kim is an award winning international landscape architect and artist whose work focuses on merging sculptural vision with the urban landscape. Mikyoung has brought her background in sculpture and music, as well as her design vision as a landscape architect, to her firm’s diverse work. Since the firm’s inception, the work of Mikyoung Kim Design has received critical acclaim winning multiple national awards for projects spanning the U.S., Asia, and the Middle East.

Kathryn Gustafson, PLA, ASLA
Gustafson Guthrie Nichol

Kathryn Gustafson brings over 30 years of distinguished practice to her partnerships in two offices, Gustafson Guthrie Nichol in Seattle and Gustafson Porter in London. Kathryn’s diverse portfolio intuitively incorporates those fundamental sculptural and sensual qualities that enhance the human experience of landscape. Recently acclaimed projects are located throughout Europe, North America, Africa, Southeast Asia, and the Middle East. These civic parks, gardens, and community spaces range in scale from a tenth of an acre to 1000 acres.
DIANA, PRINCESS OF WALES MEMORIAL
HYDE PARK, LONDON, UK

DESIGN INSPIRATION

- This memorial is distinct from traditional memorials by offering an environment that is about joyfulness and reflection
- The designer undertook extensive research to understand why Diana was loved
- The design of the water system was not only sustainable but also assists with the ecology of the adjacent Serpentine lake

FABRICATION

- A clay model of the memorial described the complex textures and patterns that would make the water tumble, cascade, curl, and bubble as it ran its course
- The stone was designed and cut using emerging digital technology
- From the source, detailed grooves and channels combine with air jets to animate the water.
- Sparkling, energetic water effects include ‘swoosh,’ ‘steps,’ and ‘rock and roll.’
- At the base, the two streams of water merge to form a still, reflective basin.
- Fresh water is pumped out of a 100-meter-deep bore hole and held in a tank below ground.

NOTES
THE INNOVATIVE USE OF METAL AND STONE IN THE CONTEMPORARY LANDSCAPE

THE PARK AT CITYCENTER
WASHINGTON, DC

DESIGN INSPIRATION

- Re-establishes the program recommended by L’Enfant for these triangular parcels of federal land where diagonal streets intersect the grid. These “bowtie parks” include fountains, sculptures, libraries, places of worship, etc.
- Park to be a threshold between Chinatown/Gallery Place and business neighborhood to NW
- Most fountains are inward focused; GGN wanted to create a fountain that is focused outwards towards the viewer
- Geometry inspired by a gemstone, shattered crystal
- Textured panels inspired by the play of water when it hits rocks in a stream; some water moves faster than other water creating waves and ripples

FABRICATION

- Descending blocks were created in Rhino, then surfaces were draped over the blocks
- All surfaces have positive flow. Water flows perpendicular to the weir so the slope and pattern of the topography directs water to spread out and into the far corners
- Physical, small scale test models were created, as were full scale mockups
- Textured panels were fabricated by CNC in Italy
- Marble plinths adjacent to water are veneer/coping. Plinths that stand to the east and south, independent of the water feature, are cubic pieces.
- The cubic pieces each weigh +/- 10 tons so delivery and install had to be done at night with particular trucks on certain roads in the city.

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THE INNOVATIVE USE OF METAL AND STONE IN THE CONTEMPORARY LANDSCAPE

GUSTAFSON GUTHRIE NICHOL
FARRAR POND PROJECT. FLEXFENCE
LINCOLN, MA

DESIGN INSPIRATION

• Identifying factors that inspired the project
• Design inspirations include natural forms on site
• Inspired by studies of movement by Eadweard Muybridge

FABRICATION

• Describing the use of modular construction systems to create an organic structure
• Balancing constructibility with aesthetics
• Value Engineering: Pragmatic Concerns that shape the design process
• Walking through Mockups and the Construction Process
• Structural viability and design
• Integration of stone and steel
• Collaborative development of solutions

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THE INNOVATIVE USE OF METAL AND STONE IN THE CONTEMPORARY LANDSCAPE
140 WEST PLAZA: EXHALE
CHAPEL HILL, NC

Aerial View of Stainless Steel Fountain  Mist and Stainless Steel Fountain  Custom Perforated Stainless Steel Skin

DESIGN INSPIRATION

• Highlighting hydrological processes
• Redefining Main Street and Open Space
• Inspiration in human anatomy and skin like structures
• Discussion about the choreography of light and experience

FABRICATION

• Describing the design process
• Balancing constructibility with aesthetics
• Value Engineering: Pragmatic Concerns that shape the design process
• Walking through Mockups and the Construction Process
• Structural viability and design
• Integration of masonry and steel design
• Collaborative development of the design and community process
• Choreographing lighting and fountain design

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DESIGN INSPIRATION

- A metal screen provides a transition from the city into the quiet repose and sanctuary of the 115 year old Westminster Presbyterian Church located in the heart of downtown Minneapolis.
- Views of the reception, interior courtyard and columbarium spaces are subtly obscured from the street by the patinaed metal screen. The perforation allows for visual connection to the urban environment, while providing tranquility in the interior.
- Inspiration for the ephemeral pattern on the perforated metal wall came from one of the most admired original stained-glass windows.
- The perforation pattern is an abstraction of the stained glass pattern, a detail which is repeated internally within the church and now externally as well.

FABRICATION

- The fence is composed of two 4’x8’ panels of perforated copper, separated by an eight inch metal frame.
- The stain-glass patterned panel faces out towards the public realm, this was achieved by modifying the standard perforation grid of the manufacturer’s panels by selectively filling in holes, creating a unique hole punch.
- A straight perforated panel faces inward, to the private realm, using the standard perforation of the metal panel.
- Both panels are bolted onto a concrete base and conceal the structural posts.
- The unique patterns on each side create a skin to the fence that changes based on perspective.
THE INNOVATIVE USE OF METAL AND STONE IN THE CONTEMPORARY LANDSCAPE

KING ABDULLAH FINANCIAL DISTRICT (KAFD) ENVIRONS STUDY
RIYADH, KSA

DESIGN INSPIRATION

- The inspiration for the form of the metal canopies was inspired by rare star sand dune formations that are found in the Rub’ al Khali ("Empty Quarter"), one of the world’s largest contiguous sand deserts.
- Star dunes are formed from winds blowing in all directions and are found in large linear extents. The star dune canopies line the parkway and offer much needed shade.
- The perforated metal is inspired by traditional Islamic patterns that have been found throughout Saudi Arabia.
- The star dune canopies offer a powerful public space to participate in the Muslim call to prayer.

FABRICATION

- C + P and Guy Nordenson and Associates developed a preliminary structural design for star dune structures to develop a gravity and lateral load resisting system that required no structural columns.
- The structure consists of a series of round steel pipe framing elements; the primary framing element is a series of five arched "spine trusses" along the ridge of each of each leg and meet at a central point in the middle of the dune.
- Each spine truss consists of a series of round steel pipe members arranged in a triangular section and serve as a framework for a draped mesh grid structure.
- The spine trusses are braced and further supported by major rib elements that branch off from the spine trusses in an irregular pattern based on the force patterns that develop from gravity and lateral load combinations.
- The interior mesh framing is small diameter round steel pipes arranged on a 4m x 4m grid projected in plan and reoriented between each set of star legs.

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