

INNOVATE

LSAA CONFERENCE
& DESIGN AWARDS

Oct 25–26, 2018

INTO

The Intersection
of Architects &
Engineers

THE FUTURE

KEYNOTE ADDRESS & PUBLIC LECTURE

KNUT STOCKHUSEN

SPEAKER PROFILE

KNUT STOCKHUSEN

Structural engineer and partner

schlaich bergemann partner (sbp)

Knut Stockhusen (born in 1974 in Waiblingen, Germany) is a structural engineer and partner / managing director at schlaich bergemann partner (sbp), an internationally renowned structural engineering and consulting firm based in Stuttgart, Germany.

Knut graduated from University of Stuttgart in 1999 and began working at sbp in 2000. As a project manager and team leader, he successfully supervised a great number of large scale, long span high rise and sport projects.

In 2008, Knut founded sbp Latin America in São Paulo, expanding the international sbp network. He was appointed partner and managing director of sbp in 2015. Today, Knut develops and manages diverse projects and supports design partners and clients all over the world. Maintaining a hands-on approach that goes beyond structural engineering, he likes to be involved throughout the whole process of his projects, from the early project development phase to detailed design, site monitoring, delivery and handover.

With numerous stadium structures during his career, Knut has shown his ability of not only designing architecturally and aesthetically pleasing projects but also efficient and therefore affordable structures. Especially mentionable are the design projects of soccer stadia for FIFA World Cups and UEFA European Championships he led over the last years, giving him invaluable experience in this area.

At present, he is involved in four stadium projects for the 2022 FIFA World Cup in Qatar.

Knut's work has earned him numerous awards both in Germany and internationally, as most recently for the Wanda Metropolitano Stadium (Spain), the Arena da Amazônia and the Stadium Maracanã (both in Brazil).

KEYNOTE ADDRESS

THE BOX THAT CAN CHANGE THE WORLD

Whether it is using a more than 200-year-old-technology for weaving a new type of high performance material, designing and constructing an ultra-thin stainless-steel shell bridge that sets new standards, or remodelling an energy storage tank so that it becomes accessible and allows visitors to enjoy a cappuccino on top of 20 million litres of boiling water – with their work and their ideas, engineers frequently contribute to projects that make a change in the world.

This public lecture sheds light to various of such forward-thinking projects.

Among many others, it will provide deep insights into the challenge of designing the Al Bayt Stadium in Qatar with the world's largest inner liner that resembles a traditional Bedouin Souk. As the lecture will show, finding a solution for this engineering challenge ultimately lead to the development of an entirely new type of woven membrane.



PUBLIC LECTURE

WEAVING TOMORROW

Whether it is using a more than 200-year-old-technology for weaving a new type of high performance material, designing and constructing an ultra-thin stainless-steel shell bridge that sets new standards, or remodelling an energy storage tank so that it becomes accessible and allows visitors to enjoy a cappuccino on top of 20 million litres of boiling water – with their work and their ideas, engineers frequently contribute to projects that make a change in the world.

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START	SESSION / ACTIVITY / PRESENTATION	SPEAKER / CHAIR
08:00	REGISTRATIONS	

DAY 1 KEYNOTE ADDRESS

09:20	CONFERENCE WELCOME	LSAA & UTS
09:30	PLATINUM SPONSOR WELCOME	Serge Ferrari
09:40	THE BOX THAT CAN CHANGE THE WORLD	Knut Stockhusen (sbp)
10:30	MORNING TEA	

FIRE & DESIGN COMPLIANCE

11:00	RETROSPECTIVE REVIEW OF INTERNATIONAL FIRE TEST REQUIREMENTS PVC/PES & PTFE/GLASS FABRICS	Martin Eddleston (MakMax Australia)
11:20	BUILDING CODE & STATE LEGISLATION CHANGES ON COMBUSTIBLE FAÇADE AND IMPLICATIONS FOR MATERIAL LIKE PTFE/GLASS AND PVC/PES	Alistair Morrison (Arup)
11:40	PANEL DISCUSSION ON FIRE & ARCHITECTURAL FABRICS	TBC
12:00	LUNCH	

PROJECT FOCUS

13:00	GOLD SPONSOR 1 WELCOME	Gale Pacific
13:10	WESTERN SYDNEY STADIUM	Joseph Pirello (Aurecon)
13:30	VENICE BIENNALE 2018 – ART / ARCHITECTURE / ENGINEERING	James Marr (Tensys)
13:50	CASE STUDIES FOR RETRACTABLE STADIUM ROOFS	Thomas Hermeking (Pfeifer GmbH)
14:10	HOTA – THE ART CENTRE GOLD COAST	Scott Rathie (Arup)
14:30	A LIGHTWEIGHT CASCADE GUTTER SYSTEM WITH LARGE LUCENT SKYLIGHT DOME	Tom Westcott (Alfresco Shade)
14:50	QUESTIONS FOR SESSION SPEAKERS	
15:00	STUDIO DESIGN WORKSHOP INFORMATION AND TEAM ASSIGNMENTS	Dr Peter Kneen (LSAA) Paula Vigeant (UTS)

AFTERNOON TEA
PUBLIC LECTURE REGISTRATIONS

PUBLIC LECTURE

16:15	WELCOME TO PUBLIC AND BRIEF INTRODUCTION TO LSAA AND SESSION	LSAA
16:30	PUBLIC KEYNOTE LECTURE WEAVING TOMORROW	Knut Stockhusen (sbp)
17:30	QUESTIONS	

19:00 for
19:30 (TBC) **PRE-DINNER DRINKS & DESIGN AWARDS CONFERENCE DINNER**
Venue (TBC), Dress Code: Jacket and tie suggested
Dinner Address by Professor Francesca Hughes (Head UTS Architecture)
Master of Ceremonies (Joseph Dean LSAA)

DAY 2

FRI 26 OCT, 2018

START	SESSION / ACTIVITY / PRESENTATION	AUTHOR / CHAIR
08:30	REGISTRATION & NETWORKING	
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DAY 2 KEYNOTE ADDRESS		
09:30	CONFERENCE DAY 2 WELCOME	
09:40	STADIUM OF TOMORROW	Chris Paterson (Populous)
10:30	MORNING TEA	
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TRANSFORMATIVE TECHNOLOGIES & CHALLENGES		
11:00	GOLD SPONSOR WELCOME	Ronstan
11:10	BUILDING CASE STUDIES IN FORM FINDING, ANALYSIS AND STANDARDISATION TECHNIQUES USING RHINO/GRASSHOPPER	Alex Leese (Icon) & Elizabeth Nel (The NRA Collaborative)
11:30	COMPUTATIONAL DESIGN AND ROBOTIC 3D PRINTING OF LIGHTWEIGHT CABLE NET STRUCTURES	Dr Tim Schork (UTS)
11:50	CHANGING THE FUTURE WORKSPACES – ROBOTICS CARBON FIBRE THREADING FOR A DATA INTEGRATED LIGHTWEIGHT CEILING STRUCTURE	Dr Dagmar Reinhardt (University of Sydney)
12:10	THE ROSENSTEIN PAVILION	Oliver Gericke (ILEK University of Stuttgart)
12:30	LIGHTWEIGHT CONCRETE: REDUCED FORMWORK, INCREASED FORM	David Pigram (UTS)
12:50	QUESTIONS FOR SESSION SPEAKERS	
13:00	LUNCH	
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DESIGN STUDIO WORKSHOP		
14:00 – 16:30	STUDIO DESIGN WORKSHOP 1 Computational Design Study workshop using Grasshopper to develop and manipulate form, analyse against design criteria and rationalise into standardised building components (guided design exercise by Alex Leese & Elizabeth Nel)	
	STUDIO DESIGN WORKSHOP 2 Hands on model making workshop covering general principles of Formfinding tension structure physical models Origami of folded plate paper model structures	
16:30	WORKSHOP Q & A	
16:40	CONFERENCE CLOSE	LSAA & UTS

KEYNOTE ADDRESS

CHRIS PATERSON

SPEAKER PROFILE

CHRIS PATERSON
Director, Populous
South Pacific region

Chris is a Director of the Populous Asia Pacific region. He is a Senior Principal with over 20 years' experience in large scale highly specialised buildings that make their mark on a city, including high profile sports projects in Australia and New Zealand such as the award winning Suncorp Stadium, Eden Park Redevelopment, Metricon Stadium, Perth Major Stadium PDP and KL Sports City.

Chris is committed to strong project leadership, pro-active and responsive client relations, and the cultivation of dedicated project teams, all key to his reputation for driving the best possible project delivery. This commitment is framed by his ongoing dedication to thoughtful and inventive high quality design and his demonstrated passion for thought and personal leadership.

Chris has a keen interest in high quality design and environmentally sustainable design. He is also highly experienced in the project delivery process and is committed to providing the best outcomes for clients.

KEYNOTE ADDRESS

STADIUM OF TOMORROW

Populous has a long history of designing for the future of sports and entertainment venues, including convention and exhibition buildings. We are constantly evolving, bringing together insights and new thinking from all of our regions. Referencing our latest projects from London to Las Vegas, India to Sydney, Chris will address how Populous incorporates architectural design, engineering and materials to create the stadiums of tomorrow.

INNOVATE INTO THE FUTURE

In the modern world, progress is fast. Exciting new opportunities and revolutions in buildings lie around every corner. New ideas in design and sustainability will shape us and our buildings as we go into the future.

LSAA CONFERENCE
& DESIGN AWARDS
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The Intersection of
Architects & Engineers

Over two days in October, Innovate into the Future will explore the expanding frontiers of architecture and engineering in lightweight structures. It will both examine the changing ideas and concepts in the field over the years, whilst looking forward to what the future holds.

The conference will show off some of the innovations that will lie at the centre of tomorrow's world. Cutting edge modern designs and concepts will be highlighted, illustrating design challenges and solutions. These will be combined with workshops that leave delegates with a hands on perspective of these revolutionary ideas.

For the very first time, reflecting the increasingly interdisciplinary world around us, expert knowledge from other disciplines will be brought to the forefront, showing how new innovations from outside the light-weight structures field can now be used to inform and shape the road ahead.

Set against the iconic backdrop of Jørn Utzon's architectural masterpiece, the Sydney Opera House, so ahead of its time that techniques needed to be invented to enable its construction, the conference aims to fulfil the same spirit of innovation and technological advancement. It promises to be an exciting, unmissable opportunity for delegates to discover through presentations and workshops what tomorrow's world of lightweight structures will look like and meet some of the key players shaping it.

SUPPORTERS

Presenting partners



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Energy storage observation tower Heidelberg , Germany

Stadium of Tomorrow by Chris Paterson



Demountable Ras Abu Aboud stadium in Qatar for Qatar 2022



2018 LSAA CONFERENCE REGISTRATION

All attendees to the Conference or the Public Lecture MUST register. You must also bring any booking voucher to the Conference Registration Desk at the Conference.

REGISTRATION FEES (\$AUD)

FULL CONFERENCE FEES FOR FINANCIAL LSAA MEMBERS \$800

This covers all sessions on both days, morning and afternoon teas, lunch, public lecture, conference dinner and the workshop.

FULL CONFERENCE FEES FOR NON LSAA MEMBERS \$950

This covers all sessions on both days, morning and afternoon teas, lunch, public lecture, conference dinner and the workshop.

EXTRA GUESTS FOR THE CONFERENCE DINNER AND AWARDS PRESENTATION \$125

This covers the pre-dinner drinks and the Conference Dinner.

PUBLIC LECTURE "WEAVING TOMORROW" BY KNUT STOCKHUSEN \$25

FULL TIME STUDENTS \$80

This covers the technical sessions on both days and the Public Lecture. It does not cover the Conference Dinner or pre-dinner drinks. To attend the Friday afternoon workshop, the student fee is an additional \$100.

2018 LSAA Conference Venue
LSAA is delighted to present its 2018 Bi-annual Conference in partnership with the University of Technology Sydney.

The conference will be held at Guthrie Theatre, Building 6, Peter Johnson Building (CB06) University of Technology Sydney (UTS), Harris Street Ultimo 2007, New South Wales Australia

The Campus is located in the city of Sydney close to Central train station.

For more information contact the LSAA Conference Coordinators

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Lightweight Structures

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