



CONNECTING TO TOMORROW

The Intersection of Architects & Engineers
LSAA Conference & Design Awards
September 12-13, 2024

INTRODUCTION

Venue

Level 3 AMDC Building
Swinburne University of
Technology

453 Burwood Road,
Hawthorn VIC 3122



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.



For more info

Contact the LSAA
Conference Coordinators

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Lightweight Structures
Association of
Australasia Inc.

PO Box 4047,
Oatley, NSW 2223

In the modern world of lightweight structures, we often find ourselves at the crossroads of architectural trends. Digital transformation offers us ground-breaking pathways to innovate on novel platforms in strange new ways, with the rise of AI asking us to rethink all we knew. A climate-crisis-driven focus on sustainability has asked us to consider our impact on the world around us through smart materials and biophilic urbanism. And new human-centric approaches to our fields have offered up frameworks spanning vast disciplinary bounds to tackle our world's most pressing problems.

Today's world must seize hold of all these new trends. Held on September 12 and 13 in Melbourne Australia, the LSAA 2024 Conference and Design Awards will spearhead the industry's approach to all these vital challenges under the banner of 'Connecting to Tomorrow'.

The theme seeks to encompass all the connections that will make up tomorrow's lightweight structures fields - connections to technology, to environment and to each other. Featuring the world leaders in the field of lightweight structures, this conference stands at an inflection point, seizing the vast opportunity to deal with these crucial issues as we build tomorrow's world, today.

Alastair Richardson



Alastair Richardson is Director of Cox and one of the world's pre-eminent sports architects. For 25 years, he has been at the forefront of fan-first sports design in the Asia-Pacific: being involved in most of the major stadia and arenas in Australia and New Zealand during that time, including Allianz Stadium, Optus Stadium, Adelaide Oval, Rod Laver Arena, the SCG and Eden Park. He has also been key in providing strategic insights to clients and government that have refined sporting infrastructure throughout the region, helping owners and operators enhance revenue and fan experience.

Contextualisation through Structure and Design

The use of innovative lightweight structures has been integral to the spread of major modern stadium structures throughout the world. In this session, Alastair Richardson, Director of COX and one of the world's pre-eminent sports architects, will explore the use of contextualisation and designing for place in crafting these cathedrals of sport. Whether in the retractable velarium of the Roman Colosseum almost two millennia ago or in the tensile membrane roof of the recently completed Allianz Stadium, roofs have defined our sporting places ever since we first had the imagination to build them. And as the next generation of lightweight structures begins to emerge, with sustainability at the core of its evolution, Alastair will seek to redefine the stadium roof for a new era.

Rachaporn Choochuey



Rachaporn Choochuey is Design Director and Co-Founder of all(zone). Her work has centred around the art of creating homely spaces in large tropical metropolises. This has included the MAIAM Contemporary Art Museum in Chiang Mai, awarded Best New Museum of Asia Pacific in 2017, as well as features internationally at museums, Biennales and Triennales around the globe, spanning Europe, North America, the Middle East and Asia. She also spearheaded all(zone)'s design of the 2022 MPavilion here in Melbourne. She is currently the Dean's Visiting Assistant Professor at Columbia University's Graduate School of Architecture, Planning and Preservation (where she was awarded a MS in Advanced Architectural Design). Kahn Assistant Visiting Professor at Yale School of Architecture for 2022.

The Art of Living Lightly

With minimum materials, how can we create a responsive environment to different climate conditions while allowing people to enjoy, move and act naturally. In her session, Rachaporn Choochuey explores this question, so fundamental to her practice. She will outline her exploration of the subject, beginning as an almost conceptual model of architecture that reacts to the situation and socio-economic conditions and developing into a more permanent structure. Rachaporn will also describe her use of fabric as a major material experiment because of its lightness, fluidity and playfulness - and how it has proven integral to her work in answering this deep question.

Awards & Dinner



LSAA 2024 Gala Awards Dinner

Dress Code – Smart Casual
Venue – Sky Lounge AMDC Building
Thursday, 12th September
Pre-dinner drinks 6:30pm, Dinner 7:00pm start

Master of Ceremonies

Dr Sofia Colabella (UoM) & Mr Robert Cahill (LSAA)

Welcome

Peter Lim (President – LSAA)
Professor Blair Kuys (Dean – SoDA)
Professor Emad Gad (Dean School of Engineering)

Dinner Address by

Professor Mark Burry AO
(Swinburne Smart Cities Research Institute)

Founding Director of the Sustainable Built Environment Initiative and Professor of Urban Futures at Swinburne University of Technology. Mark's work has taken him from the use of design computation for the almost 150 year old magnum opus of Antoni Gaudi (Basilica de la Sagrada Familia) to the development of new solutions for remote and financially stretched communities here in Australia and even a wholesale reimagining of modern higher education – combining applied research with exemplary construction and manufacturing trade practice.

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TENSILE ARCHITECTURE

Student Award Co-Sponsors



Thursday, September 12

DAY 1

08:30	Registration	
	Day 1 Keynote Address	Chair – Peter Lim
09:20	Conference Welcome	LSAA (Peter Lim – President) & Swinburne University (Prof Blair Kuys – Dean School of Design & Architecture)
09:30	Platinum Sponsor Welcome	
09:35	Contextualisation through Structure and Design	Alastair Richardson (Cox Architecture)
10:30	Morning Tea	
	Challenges	
11:00	Pathways towards zero carbon for tension membrane architecture (via zoom)	Bruce Danziger (Danziger Engineering Collaborative Inc)
11:30	Evolution of Ken Rosewall Arena, Sydney	Jane Nixon (Arup)
11:55	The journey and tools of parametric design and detailing to fabrication	James Marr (Tensys)
12:20	Lunch & Networking	
	Project Focus	Chair – Robert Cahill
13:30	Gold Sponsor Welcome	
13:35	Surbana Jurong, Singapore - synthesis of architecture and engineering	Rowan Murray (Ronstan) & Angus Macleod (Vector Foiltec)
14:00	Te Kaha Stadium, Christchurch, NZ	Rafael Guedez (Fabritecture)
14:25	Collaborating for project success - Trinity Point Marina, Lake Macquarie Project, NSW	Tom Gastin (Pattons)
14:50	The Link @ Langley Park, Western Australia	Martin Eddleston (MakMax)
15:15	Afternoon Tea	
	Student Competition Award	Chair – Dr Sophia Colabella
15:35	Student Competition Jury Review	Prof Mark Burry AO/ Prof Roland Snooks / Prof Brendon McNiven
15:45	Team 01 Presentation – Winner	
16:00	Team 02 Presentation	
16:15	Team 03 Presentation	
16:30	Break	
	Workshop 1	
16:35	Embodied Carbon Assessment Calculation Workshop	Bruce Danziger (Danziger Engineering Collaborative Inc)
17:00	Close Day 1	
17:15	LSAA Inc. 2023/24 Annual General Meeting AMDC Building Level 5 Room 501/502	Chair – Peter Lim

Friday, September 13

DAY 2

08:30	Registration	
	Day 2 Keynote Address	Chair - Peter Lim
09:25	Conference Day 2 Welcome	LSAA (Peter Lim - President) & Swinburne University (Prof Emad Gad - Dean School of Engineering)
09:35	The Art of Living Lightly	Rachaporn Choochuey - Design Director of all(zone) & Visiting Professor at Columbia University Graduate School of Architecture, Planning and Preservation, USA
10:30	Morning Tea	
	New Approaches	Chair - Rowan Murray
10:50	Gold Sponsor Welcome	
10:55	Cross Disciplinary	Dr Leanne Zilka & Associate Professor Dr Jenny Underwood (RMIT)
11:20	The Shading of One Barangaroo Sydney	Oliver Turner (Climate Engineering Company)
11:45	We can measure more accurately while saving time and money (Caroline Bay Sound Shell, NZ)	Andrew Lingman (Baytex NZ)
12:10	Elegant Efficiency: Doing more with less	Ed Daines (WilkinsonEyre)
12:35	Lunch & Networking	
	Research & Development	Chair - Dr Daniel Prohasky
13:30	Arch_Manu: Collaborative Pathways to Sustainable Digital Innovation in AEC	Dr Ivana Kuzmanovska (UNSW ADA)
13:55	Collaboration Scenarios between Architects and Artificial Intelligence	Dr Alberto Pugnale (UoM)
14:20	Performance based digital design & fabrication on freeform structures	Dr Nic Bao (RMIT)
14:45	Bio Havens: Open Research Questions in Structural Innovation for Urban Biodiversity	Dr Stanislav Roudavski (UoM)
15:10	Afternoon Tea	
15:40	Tour of AMDC (with Wilkinson Eyre) Tour of Swinburne Laboratories - Digital Construction Lab Trimble Lab Prototype Lab	
16:50	Conference Close	LSAA & Swinburne

Presenting Partners



The contributions of the Faculty of Architecture, Building & Planning of The University of Melbourne and School of Architecture and Urban Planning of RMIT University are gratefully acknowledged.