



# Connecting the City

People, Density &  
Infrastructure

## Conference Guide



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## Conference Co-Chairs' Message

Since the 2008 global financial crisis, Australia has enjoyed unrivaled economic growth on the back of a mining- and **infrastructure-led boom**. This growth has led to Australian cities investing in infrastructure projects, especially transport, to support the next generation of urban development. In Sydney, the Sydney Metro rail is the second largest transport infrastructure project in the world after London's Cross Rail. Melbourne Metro, likewise, creates a vast extension of the city's **public transport network** – and in Brisbane, a new connection, Cross Rail, is being planned. These projects will greatly enhance the connectivity of Australian cities, transitioning them from suburban car-oriented cities to denser polycentric **urban conglomerations**, and in the process leading to a wider debate about city form, density, and height.

New high-rise developments underway and in planning will also transform Australian cities. However, the age of the tall building as a single iconic piece of sculpture, standing in isolation from its surroundings, must now come to an end. We have a responsibility to ensure that these permanent urban structures engender a **future-oriented urban response** to the greatest challenges of our time: unprecedented population growth; mass urbanization; climate change; environmental degradation; social, political and economic change; and the rapid advance of **myriad technical innovations**.

The future of humanity on this planet relies on the collective benefits of **urban density**; reducing both land consumption and the energy needed to construct and operate the horizontally-dispersed city. Tall buildings must now be the vehicles for creating increased density not just through sheer height, but by **connecting multiple layers** of the city. Physical urban infrastructure, circulation, greenery, and urban functions traditionally restricted to the ground level would all, ideally, continue up and into the building, such that the buildings themselves become an extension of the city: a part of the two-dimensional **horizontal urban plane flipped vertical**.

Of course, all buildings need to also be considered for their sculptural qualities, but the form and aesthetics should result from a consideration of the local **culture and climate**, and a desire to create a new, locally relevant, high-rise vernacular, rather than stand out as attention-seeking entities. Above all, it needs to be remembered that these buildings are built to accommodate people, in multiple modes of activity, and a new, more **humanized model** for the skyscraper needs to develop; a softer model incorporating human scale, communal spaces, and nature.

The CTBUH 2017 Conference will thus be inquiring far beyond the tall building as an icon, to debate a new set of **guidelines and responsibilities** toward skyscrapers becoming "connectors" in the city. The discussion will embrace every discipline, from urban planning to cost consulting, architectural design to vertical transportation, real estate development to curtain wall design. There is no better place for this discussion than Sydney; a city with a 230-year history in urban development that finds itself at the nexus of much of the current debate about cities: **density vs. suburbanization**; modernity vs. historical preservation; infrastructure vs. urban life; the high- vs. low-rise realms. Of course, no CTBUH conference in Australia would be complete without considering Melbourne or Brisbane, the country's other **premier urban laboratories**. Thus, the fourth and fifth day of the conference will comprise regional programming in those cities.

Sydney, Melbourne, Brisbane, and indeed all Australian cities are in the process of transforming through the **combined power of infrastructure and density**. Australia is therefore the ideal location to explore the themes of People, Density, and Infrastructure at the CTBUH Connecting Cities Conference. We hope you enjoy the next few days!



**Ken McBryde**  
*Director, Sydney Architecture Studio*



**Jeff Morgan**  
*Associate Principal, Grimshaw Architects*



**Philip Vivian**  
*Director, Bates Smart*



**Antony Wood**  
*Executive Director, CTBUH*



### Continuing Education Credits

Conference delegates are eligible to receive up to 30 hours of CES (Continuing Education Credits) credits for their attendance across the five days, administered by the American Institute of Architects (AIA). Visit the CTBUH exhibition suite in the Ballroom foyer to pick up and drop off your AIA forms.

# Thank You to All Our Sponsors:

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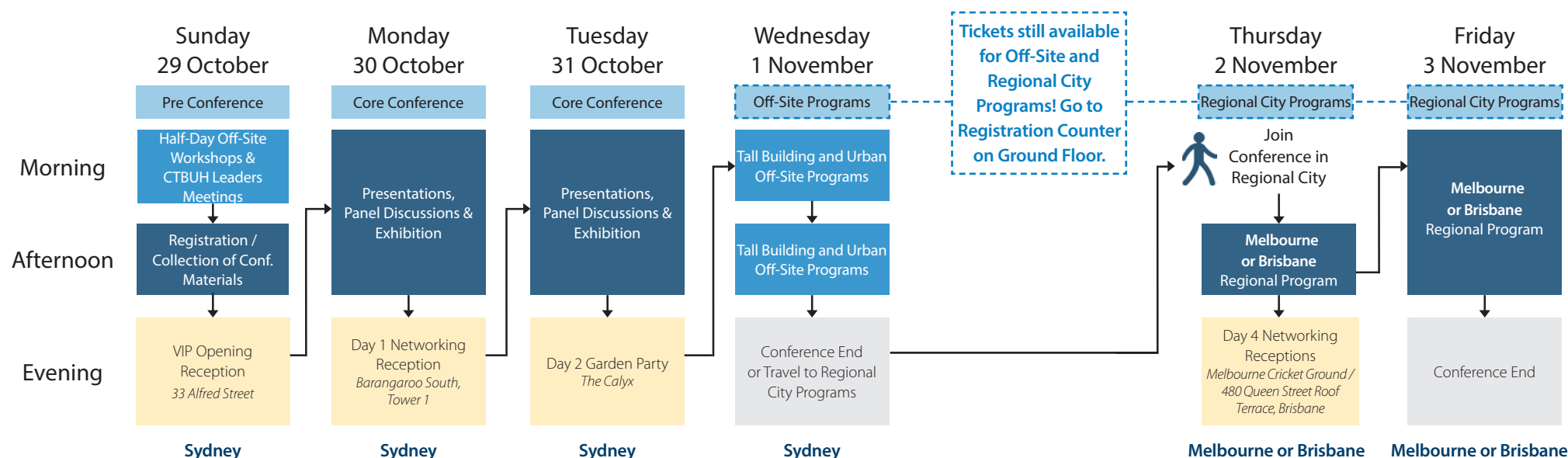


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# Important Conference Information

## Conference Overview



## Presentation Sessions & Space Allocations

Each day of the core Conference in Sydney will begin precisely at 9:00 a.m. so it is important that you take your seat in the Grand Ballroom 10–15 minutes before this time. After the Keynote sessions on each morning, nine parallel tracks will begin, each focused on a different theme and hosted in the ballrooms and program rooms as show in the Sydney venue plan (see page right). The themes of the nine parallel tracks, and speakers, can be seen in the program overview on pages 8–9 and 16–17.

## Name Badge Designations

Name Badge colors indicate important hierarchies within the CTBUH network, and the conference itself, as outlined below. Please note that your name badge needs to be worn at **ALL** conference events:

**Blue:** CTBUH Leaders and Conference Presenters

**Green:** Sponsors and Supporting Partners

**Purple:** CTBUH Members, at the organizational or individual level

**Yellow:** Conference Delegates (non-CTBUH members)

**Orange:** Press and Media

**Black:** Event Staff

## Conference Materials

Upon registering, delegates will receive a Name Badge containing the following:

- **Conference Bag Ticket.** All conference bags contain this conference guide, the conference book of abstracts, the delegate attendance list, the conference-themed CTBUH Journal, and other useful information.
- **Delegate USB Drive.** With the kind support of UEMS, the USB drive contains a digital version of all the presentations to be given at the conference, as well as abstracts.
- **Additional Event Registrations** (if pre-registered). Registrations for pre-booked additional events – such as the five evening networking receptions, the follow-on Melbourne and Brisbane segments, coach travel between certain off-site programs (see page 28–29) and the off-site programs themselves – are printed on the back of your name badge, which you must show at each venue.

## 20|20 Panel Discussions

We have included a new “20|20” discussion panel to some sessions in the 2017 Conference, cutting across the program. In these sessions, five panelists will give their view on a range of topics, using 20 slides for 20 seconds each, before engaging the other panelists and audience in discussion. Look for these sessions featuring the track-specific colored designation in the program overview pages:

20 | 20 Panel Discussion

## CTBUH Leaders

Please note that CTBUH Leaders (Board of Trustees, Advisory Group, Regional Representatives & Committees/Working Group Chairs), are designated throughout this document, with the following designation:

CTBUH Leader

## Delegate Feedback

We ask for your feedback on the conference at the end of your experience with us. Please tell us what has worked well, and what might have been improved on, at [2017.ctbuh.org/feedback](https://2017.ctbuh.org/feedback). It really does help us make future events better.



## Core Sydney Program: Venue Plan

### Exhibitors (in alphabetical order)

Booth No. / Program Room	Exhibitor
18	AET Flexible Space
13	Aliaxis
16	ALUCOIL
6	AMP Capital Investors
Room I	Arcadis
22	Bates Smart
25	BG&E
7	Brookfield Properties
11	Cricursa
1-4	CTBUH
15	Dow Corning Corporation
10	Fine DNC
14	HALFEN
27	Hummingbird Kinetics
19	Jiangsu CN Eco-Materials
9	JLL
Room G	KONE
5	Lendlease Corporation
Room E	Monash University
Room D	Pelli Clarke Pelli Architects
26	Ping An Real Estate
21	RWDI
24	Schindler
17	Studco
8	Taiwan Glass
20	TESolution
Room H	thyssenkrupp
23	UEM Sunrise
12	Windtech Consultants
Room F	WSP

## Program Rooms

Track	Theme	Host
<i>Note: Letters refer to both sessions and program rooms as show on plan</i>		
<b>A</b>	Urban Policy & Planning	CTBUH
<b>B</b>	Building for People	CTBUH
<b>C</b>	Re-Thinking Typologies	CTBUH
<b>D</b>	Transit Oriented Development	Pelli Clarke Pelli
<b>E</b>	Advanced Construction & Engineering	Monash/MCCB
<b>F</b>	Creating Competitive Cities	WSP
<b>G</b>	Smart Tall Buildings	KONE
<b>H</b>	Public Realm	thyssenkrupp
<b>I</b>	The Human Experience – In & Around Tall Buildings	Arcadis
<b>J</b>	Academic Initiatives	CTBUH



# Visit the Extended CTBUH Exhibition Suite!

While we do have new publication releases, we aren't just a bookshop this year! Visit the CTBUH Exhibition Suite in the Grand Ballroom Lobby to discuss getting involved in specific initiatives, as outlined below.

## ▶ CTBUH Bookshop & New Publication Launches

CTBUH is launching five new publications at the conference that will all be available for purchase at the shop. Grab a coffee, meet the authors, and talk about these new CTBUH publications at the book launch event!



### Book Launch Event

**When:** 3:15 – 3:45 pm,  
Monday 30 October

**Where:** Grand Ballroom  
Lobby

## ▶ Global Initiatives & Membership

Get involved in CTBUH initiatives around the world and consider becoming a Regional Representative! If not a member, then please also consider becoming one. Visit Patti Thurmond and Nicole McLellan at the CTBUH Membership Booth to learn more.



Patti Thurmond  
CTBUH Operations  
Manager



Nicole McLellan  
CTBUH Global Initiatives  
Assistant

## ▶ Research Division

Learn about our latest research initiatives and how you can get involved. Visit Dario Trabucco and Angela Mejinor at the Research Booth.



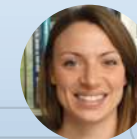
Dario Trabucco  
CTBUH Research  
Manager



Angela Mejinor  
CTBUH Research  
Assistant

## ▶ Next CTBUH Conference: Middle East 2018

Interested in having a larger role in next year's conference? Want to present, sponsor, exhibit or help? Visit Jessica Rinkel-Miller and Natalie Schoetz at the 2018 Conference Booth to learn more!



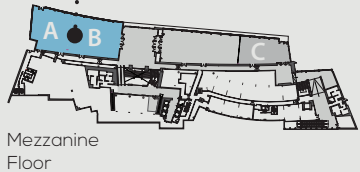
Jessica Rinkel-Miller,  
CTBUH Events Manager



Natalie Schoetz  
CTBUH Events Assistant

# Sydney Keynote Sessions

All Keynote sessions are located in Grand Ballrooms 1 & 2 combined

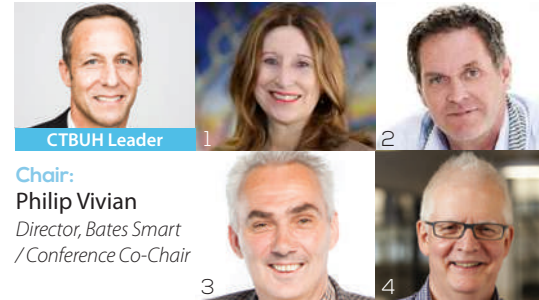


Session 1

## Plenary 1: Mon. 30 October, 9:00–10:45 a.m. Connecting the City: Sydney

Refer to Book of Abstracts page 19

Sydney is in the midst of a transformative development cycle. Buoyed by the Sustainable Sydney 2030 plan, the city is implementing a series of improvements aimed at enhancing environmental performance, economic prosperity, and social wellbeing. Central to this objective is the role of new transit infrastructure in connecting disparate parts of the city, in addition to major projects like Quay Quarter Tower, Circular Quay Tower, and Wynyard Place that are transforming the CBD.



**Chair:**  
**Philip Vivian**  
Director, Bates Smart  
/ Conference Co-Chair

### Keynote Speakers:

1 **Monica Barone**  
CEO, City of Sydney  
"Sustainable Sydney 2030 Plan"

2 **Kim Nielsen**  
Founder, Principal, & Creative  
Director, 3XN  
"Quay Quarter Tower:  
Humanizing the High-Rise"

3 **Gerard Evenden**  
Head of Studio and Senior  
Executive Partner, Foster + Partners  
"Circular Quay Tower: The Next  
Tallest Office Building in Sydney"

4 **Ken Shuttleworth**  
Founding Partner, Make  
"Wynyard Place"

Session 5

## Plenary 2: Tue. 31 October, 9:00–10:45 a.m. The Future of the Workplace

### Panel Discussion

Refer to Book of Abstracts page 25

As companies continue to occupy dense urban centers, the workplaces therein must constantly evolve across numerous dimensions: tenant demands, overall market shifts, environmental standards, and technological advancements, to name a few. This panel discussion explores the trajectory of these influencing factors, offering a picture of the next generation of high-rise workplaces, with presentations from high-profile experts in the field.



### Chair:

**Steve Watts**  
CTBUH Chairman-Elect / Partner,  
alineaa consulting

### Keynote Panelists:

1 **Anthony Henry**  
Head of Workspace  
Design, Macquarie  
Bank

2 **Robbie Robertson**  
Partner | Experience  
Design, Deloitte  
Consulting

3 **Jennifer Saiz**, Head of  
Group Property,  
Commonwealth  
Bank of Australia

4 **Cameron Scott**  
Chief Operating  
Officer - Corporate  
Solutions, JLL

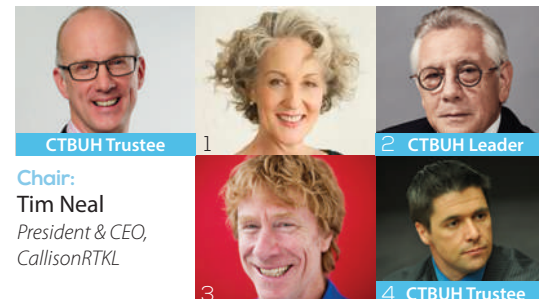
5 **David Malott**  
CTBUH Chairman /  
Founder and CEO, AI.

Session 8

## Plenary 3: Tue. 31 October, 3:45–5:30 p.m. The Future of Connected Cities and Skyscrapers

Refer to Book of Abstracts page 27

At the conclusion of the first two conference days in Sydney, leading industry figures gather to reflect on the proceedings thus far and discuss the cutting-edge trends on both the building and urban scale. Presentations uncover the trends shaping the vertical urban landscape of the future – both in Australia and around the world – by examining forward-looking case studies that exude the vision of the "connected city." The session will end with the formal launch of next year's CTBUH 2018 Conference!



**Chair:**  
**Tim Neal**  
President & CEO,  
CallisonRTKL

### Keynote Speakers:

1 **Elizabeth Farrelly**  
Associate Professor, Australian  
School of Urbanism, Sydney  
"Green or Greed: Density-Done-Well  
or Developer Free-for-All?"

2 **Karl Fender** Managing  
Principal, Fender Katsalidis  
Architects  
"The Future of the Australian  
Skyscraper"

3 **Ivan Harbour** Senior Partner,  
Rogers Stirk Harbour + Partners  
"The Human-Scaled Future of  
Dense Development"

4 **Antony Wood**  
CTBUH Executive Director  
"Vertical Cities of the Future"



# Day 1 Sydney: Program Overview

Monday 30 October

8:00 a.m. – 9:00 a.m.

Arrival & Breakfast, *Sponsored by Studor*

## Session 1

9:00 a.m. – 10:45 a.m.

| See pg 7 |

Welcome



**David Malott**  
CTBUH Chairman /  
Founder and CEO, AI

**Antony Wood**  
CTBUH Executive Director

Opening Address



**Anthony Roberts**  
Minister for Planning, Housing and  
Special Minister of State

Plenary 1



**Connecting the  
City: Sydney**



**Chair: Philip Vivian**  
Director, Bates Smart / Conference  
Co-Chair

10:45 a.m. – 11:15 a.m.

Coffee Break, *Sponsored by Tongji Architectural Design Group*

## Track A: Urban Policy & Planning

## Track B: Building for People

## Track C: Re-Thinking Typologies

## Track D: Transit-Oriented Development

2A

### Urban Policy



**Chair: Caroline Stalker**  
Australasian Design Director (Urban), Arup

**Tim Williams**, CEO/Principal, Committee for  
Sydney & Principal, Arup

**Helen Lochhead**  
Dean, Faculty of Built Environment, University of  
New South Wales

**Chris Wilkinson**  
Founding Director, WilkinsonEyre

2B

### Quay Quarter Tower Sydney



**Chair: Eve Clark**  
Design Director, AMP Capital Investors

**Fred Holt**  
Architect and Partner, 3XN

**Chris Nunn**, Head of  
Sustainability, Real Estate, AMP Capital Investors & **Robert Saidman**  
Principal, Arup

**Tom Dixon**  
Creative Director, Tom Dixon/Design Research Studio

2C

### Modular Construction



**Chair: Sophie Giles**  
Deputy Head - Education, UWA  
School of Design Modular

**James Murray-Parkes**  
Science & Engineering Director, Multiplex  
Engineering Innovations Group

**Nonda Katsalidis**  
Director and Partner, Fender Katsalidis Architects

**Phil Gardiner**  
Managing Director, Irwinconsult

2D

### Transit-Oriented Development: North America



**Chair: Aicha Woods**  
Senior Principal, Pelli Clarke Pelli Architects

**Mark Shoemaker**  
Principal, Pelli Clarke Pelli Architects

**James Parakh**  
Urban Design Manager, City of Toronto  
Planning Department

**Steven Baldrige**  
President, Baldrige & Associates  
Structural Engineering, Inc. (BASE)

12:45 p.m. – 1:45 p.m.

Lunch, *Sponsored by Siemens*

## Session 3

1:45 p.m. – 3:15 p.m.

Concurrent Tracks + Q & A

| See pg 12-13 |

*Also occurring at this time:*  
2017 International Student  
Design Competition: Presentations  
& Final Judging in Room J, see pg 23

3A

### Urban Scale Infrastructure



**Chair: Clare Swan**  
Director, JBA Urban Planning Consultants Pty Ltd

**Laurane de Gendre**  
Transport Planner, AECOM

**Douglas Voigt**  
Partner, Skidmore, Owings & Merrill LLP

**Bas Nolte**  
Global Business Development Manager High Rise  
Drainage Solutions, Alaxis

3B

### Connecting the City: A Global Perspective

**Chair: Carl Schibrowski**  
Head of Development - Australia, Brookfield Properties

**Earle Arney**  
Founder, Arney Fender Katsalidis

**Ian Lomas**  
Partner, Make

**Joshua Prince-Ramus**  
Founding Principal, REX Architecture

Panel Discussion

3C

### Tall Timber



**Chair: Terri Meyer Boake**  
Professor, University of Waterloo

**Philip Vivian**  
Director, Bates Smart

**Robert Foster**  
Senior Lecturer, University of  
Queensland

**Thomas Robinson**  
Principal, LEVER Architecture

3D

### Transit-Oriented Development: Australia



**Chair: Jeff Morgan**  
Associate Principal, Grimshaw Architects

**Frank Cerra**  
Managing Director, BG&E

**Ramin Jahromi**  
Director, Cox Architecture

**Donald McNeill**  
Professor, University of Western Sydney

3:15 p.m. – 3:45 p.m.

Coffee Break, *Sponsored by Hongkong Land*; **Attend the CTBUH Book Launch Event at the CTBUH Exhibition Suite! See pg 6**

4A

### Connected Buildings and Urban Mobility



**Chair: Ame Engelhart**, Director - Hong  
Kong, Skidmore, Owings & Merrill LLP

**Fred Clarke**, Senior Design Principal,  
Pelli Clarke Pelli Architects

**Michael Nilles**  
Chief Digital Officer, Schindler

**Peter Halliday**  
Global Head, Building Performance and  
Sustainability, Siemens Building Technology

4B

### Circular Quay Tower: Aligning Private and Public Outcomes

**Chair: David Rolls**  
National Development Director, Lendlease Corporation

**Kimberley Jackson**  
Project Director, Lendlease Corporation

**Graham Jahn**  
Director of City Planning, Development &  
Transport, City of Sydney

**Ross Palmer**  
Senior Partner, Foster + Partners

Panel Discussion

4C

### Vertical Schools



**Chair: Karen Wong**  
Associate Director, Bates Smart

**Shu-Hsin Soong**, Technical Director &  
Education Sector Leader, AECOM

**Andrew Cortese**  
Partner, Grimshaw Architects

**Camille Lattouf**  
Associate, Urban Planner, Architectus

4D

### Transit-Oriented Development: Asia



**Chair: Aicha Woods**  
Senior Principal, Pelli Clarke Pelli Architects

**Sam Lai**, Project Director and General Manager,  
Sun Hung Kai Properties Limited

**Mulyadi Janto**  
Director, PT Farpoint Prima

**Yin Jia**  
Founder, EFC Engineering Consulting

6:00 p.m. – 8:00 p.m.

Barangaroo South – Tower 1 Networking Reception, *Hosted by Lendlease & Sponsored by Schindler*; 8-minute walk from the Hyatt Regency Hotel, see page 26





**Keynote 1:**  
**Monica Barone**  
 CEO, City of Sydney  
 "Sustainable Sydney 2030 Plan"



**Keynote 2:**  
**Kim Nielsen**  
 Founder, Principal, & Creative Director, 3XN  
 "Quay Quarter Tower: Humanizing the High-Rise"



**Keynote 3:**  
**Gerard Evenden**, Head of Studio and Senior Executive Partner, Foster + Partners  
 "Circular Quay Tower: The Next Tallest Office Building in Sydney"



**Keynote 4:**  
**Ken Shuttleworth**  
 Founding Partner, Make  
 "Wynyard Place"

## Track E: Advanced Construction & Engineering

### 2E Construction & Management



**Chair:** Athena Andriotis, Executive Director, Sector Development, Government of Victoria

**Nicholas Ferrara**  
 Director, Rider Levett Bucknall

**Stuart Orr**  
 Managing Director, EFT-CRAFT Company Limited

**Robert Peckar**  
 Founding Partner, Peckar & Abramson, P.C.

## Track F: Creating Competitive Cities

### 2F Branding the City



**Chair:** Viviana R. Muscettola  
 Associate Director, Zaha Hadid Architects

**Eamon Waterford**  
 Director of Policy, Committee for Sydney

**Christian Derix**, Principal and Director – SuperSpace, Woods Bagot

**Matthew Khoo**  
 Deputy Manager Director, ICD Property

## Track G: Smart Tall Buildings

### 2G Future Technologies



**Chair:** Tomio Pihkala  
 Executive Vice President, KONE

**David Malott**  
 CTBUH Chairman / Founder and CEO, AI.

**Jeffrey Montgomery**  
 Director, Major Projects, Asia-Pacific, KONE

**Russell Gilchrist**  
 Principal, Gensler

## Track H: Public Realm

### 2H The Tall Australian Office Building: In Conversation

**Chair:** Cameron Bruhn, Editorial Director, Architecture Australia

One William Street

**Chris Kakoufas**  
 General Manager, Development, Cbus Property

**Mark Damant**  
 Director, Woods Bagot

**Margaret Petty**  
 Head of School of Design, Queensland University of Technology

200 George Street

**Simon Healy**  
 General Manager of Commercial Development, Mirvac Developments

**Richard Francis Jones**, Design Director, Francis-Jones Morehen Thorp Pty Ltd

**Philip Oldfield**  
 Senior Lecturer, University of New South Wales

Panel Discussion

## Track I: The Human Experience – In & Around Tall Buildings

### 2I The User Experience



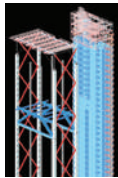
**Chair:** Pru Sanderson  
 Regional City Executive – Melbourne, Arcadis

**Kenneth Turner**  
 Director, CallisonRTKL

**Thi Le Yen**  
 Managing Director, Lavenue Investment Corporation

**Natalie Slessor**  
 General Manager of Workplace and Change, Lendlease Corporation

### 3E Structural Engineering



**Chair:** Meg Redwin  
 Executive Director, Multiplex

**SawTeen See** & **Simon Cloherty**  
 Managing Partner, Leslie E. Robertson Associates & Principal, Robert Bird Group

**Honglei Wu**  
 Deputy Chief Engineer, Tongji Architectural Design (Group) Co., Ltd.

**Donald Davies**  
 President, Magnusson Klemencic Associates

### 3F Density and Urbanity in the Sydney Context

**Chair:** Richard Palmer  
 Director, Sustainability, WSP

**Graham Jahn**  
 Director of City Planning, Development & Transport, City of Sydney

**Ken McBryde**  
 Director, Sydney Architecture Studio

**Kim Nielsen**  
 Founder, Principal, & Creative Director, 3XN

**Tanya Vincent**  
 Principal Manager, Urban Design, Transport for NSW

Panel Discussion

### 3G Smart Technologies



**Chair:** Santeri Suoranta  
 Director, High Rise Platforms, Major Projects, KONE

**Richard Morrison**  
 Practice Lead – Information Communications Technology, AECOM

**Shonn Mills**  
 Director, Ramboll Group

**Johanna Trickett**  
 ESD Consultant, Aurecon

### 3H Public Realm – Interior Systems



**Chair:** Winnie Cheung  
 Business Development Director, AET Flexiblespace

**Dario Trabucco**  
 Research Manager, Council on Tall Buildings and Urban Habitat

**Markus Jetter**  
 Head of Product Development, thyssenkrupp

**Michael Olitsky**  
 Vice President, Gdalia Olitsky Engineering LTD

### 3I The Residential Experience



**Chair:** Louisa Carter  
 South East QLD City Executive, Arcadis

**Andrew Liu**  
 Vice President, Service Leader, Global Excellence Center, CallisonRTKL

**Raymond Cheah Ho Chee**  
 Chief Operating Officer, Commercial, UEM Sunrise Berhad

**Guy Lake**  
 Director, Bates Smart

### 4E Modular Construction: A Conversation

**Chair:** Matthew Davey  
 Lead Structural Engineer, Multiplex Engineering Innovations Group

**Yu Bai**  
 Associate Professor, Monash University

**Philip Gardiner**  
 Managing Director, Irwinconsult Pty.

**Rob Johnson**  
 Customer & Market Relationship Manager, Liberty OneSteel

**James Murray-Parkes**  
 Science & Engineering Director, Multiplex Engineering Innovations Group

20|20 Panel Discussion

### 4F Skyline Iconography



**Chair:** Vincent Tse, CTBUH Trustee / Managing Director, Building MEP, China Region, WSP

**Eric Parry**  
 Founder and Principal, Eric Parry Architects

**Karen Cook**  
 Founding Partner, PLP Architecture

**Kamran Moazami** & **Nick Offer**  
 Head of Discipline, Building Structures, WSP & Director / Head of MEP, WSP

### 4G SMART Case Studies



**Chair:** Zhizhe Yu  
 Co-Founder and Managing Director, AI.

**Arron Money**  
 Executive Manager, SKYCITY Entertainment Group

**Peter Hodgins**  
 AP Watson IoT EAM Executive, IBM

**Steve Gonzalez**  
 Director, Major Projects, Americas, KONE

### 4H Public Realm – Exterior



**Chair:** Ilkay Can-Standard  
 Founder, GenX Consultants

**Grant Marani**  
 Partner, Robert A.M. Stern Architects

**Daniel Kaplan**  
 Senior Partner, FXFOWLE Architects

**Michael Bischoff**  
 Partner, Pei Cobb Freed & Partners

### 4I The Retail Experience

**Chair:** Eric Lagerberg  
 Global Practice Group Leader, Retail, CallisonRTKL

**Rosemary Condon-Caric**  
 National Portfolio Manager, Retail Services, ISPT

**Mounib Hammoud**  
 CTBUH Trustee / CEO, Jeddah Economic Company

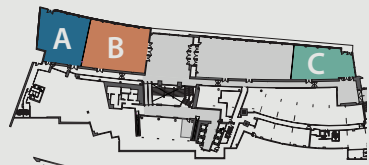
**Narelle Hutchins**  
 Head of Place Strategy and Design, AMP Capital Investors

**Ken Knox**  
 Development Director, Retail and Mixed Use Development, GPT

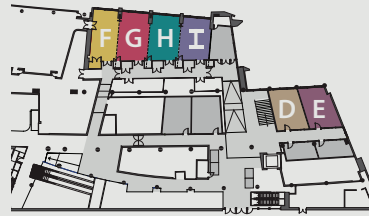
20|20 Panel Discussion

# Day 1 Sydney Session 2

Monday 30 October  
11:15 a.m. – 12:45 p.m.



Mezzanine Floor



Ground Floor

## Speaker Order

Session Chair	1
2	3

## 2A Urban Policy

Refer to Book of Abstracts page 35

Although cities are a collection of private and public developments, the idea of a unified urban policy is central to achieving coherent and livable environments. This session will examine how cities are being planned, investigating the methods and agendas that have been developed to guide future development. Particular emphasis will be placed on the role of various levels of government and their interactions with the design community.



**Chair:** Caroline Stalker  
Australasian Design Director (Urban), Arup

**Tim Williams**, CEO/Principal, Committee for Sydney & Principal, Arup  
"Cities: The Orphans of Public Policy in Australia"

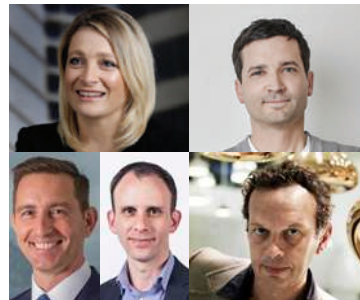
**Helen Lochhead**, Dean, Faculty of Built Environment, University of New South Wales  
"The Role of Design Competitions in Shaping Sydney's Public Realm"

**Chris Wilkinson**  
Founding Director, WilkinsonEyre  
"Urban Policy Towards Tall Buildings Globally: The Architect's Perspective"

## 2B Quay Quarter Tower Sydney

Refer to Book of Abstracts page 57

Quay Quarter Tower is one of the most innovative projects in Sydney, reimagining the office high-rise for contemporary needs, with "campus style" offices and stacked vertical villages that break down the massing of the tower. Moreover, a comprehensive approach to sustainability considers the tower's impact across its full life cycle, from recycled structural materials to high-performance façades, all leading to an exemplary energy rating.



**Chair:** Eve Clark  
Design Director, AMP Capital Investors

**Fred Holt**  
Architect and Partner, 3XN

"Future of Work:  
The Shape of Revolutionary Thinking"

**Chris Nunn**, Head of Sustainability, Real Estate, AMP Capital Investors & **Robert Saidman**, Principal, Arup

"Sustainability (Urban Renewal):  
Upcycling an Existing Tower"

**Tom Dixon**, Creative Director, Tom Dixon/Design Research Studio

"Bringing Lifestyle to the Workplace"

## 2C Modular Construction

Refer to Book of Abstracts page 77

Modular construction is becoming an established practice for efficiently building high-rises around the world. Presentations in this session will examine the benefits of various modular construction practices around the world, as well as the evolving rules and guidelines that dictate best practices for the concept, as indicated in the seminal *Handbook for the Design of Modular Structures*.



**Chair:** Sophie Giles, Deputy Head - Education, UWA School of Design

**James Murray-Parkes**, Science & Engineering Director, Multiplex Engineering Innovations Group

"Overview of the Handbook for the Design of Modular Structures"

**Nonda Katsalidis**  
Director and Partner, Fender Katsalidis Architects

"Manufactured Architecture: Light-Weight Prefabrication in High-Rise Buildings"

**Phil Gardiner**  
Managing Director, Irwinconsult

"From Where to Where for Modular Construction?"

## 2D Transit-Oriented Development: North America

Refer to Book of Abstracts page 99

Transit oriented development practices have transformed the relationship between tall buildings and transit in cities around the world. This session investigates these applications in North America, examining how various planning regimes in the United States and Canada have positively reinforced the role of transit connectivity in creating livable cities. Presentations will highlight exemplary transit oriented projects on the continent.



**Chair:** Aicha Woods  
Senior Principal, Pelli Clarke Pelli Architects

**Mark Shoemaker**  
Principal, Pelli Clarke Pelli Architects

"How Salesforce Tower and the Transbay Transit Center Helped Spark a Debate About Where to Develop"

**James Parakh**, Urban Design Manager, City of Toronto Planning Department

"Transit-Oriented Developments in Canada"

**Steven Baldridge**, President, Baldridge & Associates Structural Engineering, Inc. (BASE)

"Kaka'ako – Transforming a Former Warehouse Area Into a Vibrant Pedestrian-Oriented Community"

2E

## Construction & Management

Refer to Book of Abstracts page 119

The large number of stakeholders and high value of investments in high-rise projects naturally produce a complex and delicate legal framework of agreements that often dictate the success of a given project. As a result, contractor bidding, construction management, and project turnover are all intricate processes that require close attention to detail. This session examines best practices in all areas of construction and management, with an aim at identifying ways of minimizing financial and legal risks across all project stakeholders.



**Chair:** Athena Andriotis, Executive Director, Sector Development, Government of Victoria

**Nicholas Ferrara**  
Director, Rider Levett Bucknall

"Sky-High: The Role of the Independent Certifier in High-Rise Buildings – A Case Study"

**Stuart Orr**, Managing Director, EFT-CRAFT Company Limited

"Rethinking the Competitive Bid Framework"

**Robert Peckar**  
Founding Partner, Peckar & Abramson, PC

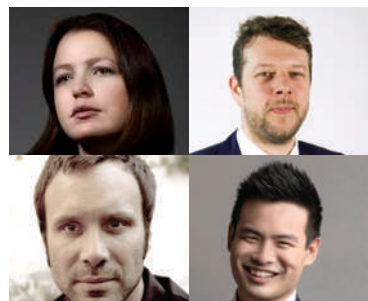
"Enlightened Management of Project Problems and Disputes"

2F

## Branding the City

Refer to Book of Abstracts page 139

As the world becomes more digitally connected, cities are increasingly competing against one another across the globe. In this environment, branding and marketing have become important outlets for differentiating cities. This session explores how urban branding has evolved in the era of globalization, investigating the importance of benchmarking against competitors and the role of international comparisons in livability across cities, cultures, and environments.



**Chair:** Viviana R. Muscettola  
Associate Director, Zaha Hadid Architects

**Eamon Waterford**  
Director of Policy, Committee for Sydney

"Benchmarking Our Performance – How Does Sydney Compare?"

**Christian Derix**, Principal and Director – SuperSpace, Woods Bagot

"Global Cities Brand versus Local Neighborhood Operations"

**Matthew Khoo**  
Deputy Manager Director, ICD Property

"Design in Density – The Key to Achieving the Desired Outcome for a 'Livable City'"

2G

## Future Technologies

Refer to Book of Abstracts page 157

Certain technologies are poised to reshape the future of skyscrapers, with an emphasis on next-generation sustainability, artificial intelligence, and advances in extreme height, among other topics. Presentations will cover state-of-the-art technologies applied in the vertical realm, and those that are challenging how architects and engineers approach the process of design at its most fundamental level.



**Chair:** Tomio Pihkala  
Executive Vice President, KONE

**David Malott**, CTBUH Chairman / Founder and CEO, AI.

"Beyond Tall: The Living Building"

**Jeffrey Montgomery**  
Director, Major Projects, Asia-Pacific, KONE

"Maintaining the Life Cycle and Increasing the Value of High-Rise Buildings"

**Russell Gilchrist**  
Principal, Gensler

"The Sky is the Limit?"

2H

## The Tall Australian Office Building: In Conversation

Refer to Book of Abstracts page 177

Convened by the publication "Architecture Australia," architects, clients and critics will come together to discuss two landmark Australian towers – 1 William Street by Woods Bagot in Brisbane, and the EY Centre designed by FJMT in Sydney. The session will examine these two new buildings, the manner in which each responds to its unique environment and the dialogue they foster with the urban realm.

### Panel Discussion



**Chair:**  
**Cameron Bruhn**  
Editorial Director,  
Architecture Australia

*One William Street:*



**Chris Kakoufas**  
General Manager,  
Development, Cbus Property



**Mark Damant**  
Director, Woods Bagot



**Margaret Petty**  
Head of School of Design,  
Queensland University of  
Technology

*200 George Street:*



**Simon Healy**  
General Manager of  
Commercial Development,  
Mirvac Developments



**Richard Francis Jones**  
Design Director, Francis-Jones  
Morehen Thorp Pty Ltd



**Philip Oldfield**  
Senior Lecturer, University of  
New South Wales

CTBUH Leader

2I

## The User Experience

Refer to Book of Abstracts page 197

Mixed-use projects, increasingly the norm in high-rise construction, come with a variety of added challenges, particularly in relation to connectivity across programming and within vertical zones. This session examines solutions that positively benefit the user experience with respect to the increasing complexity of contemporary tall buildings.



**Chair:** Pru Sanderson  
Regional City Executive - Melbourne, Arcadis

**Kenneth Turner**  
Director, CallisonRTKL

"Inside & Out: Tall Tower Connectivity & Enriching the Experience of the Built Environment"

**Thi Le Yen**, Managing Director, Lavenue Investment Corporation

"The Needs and Challenges of Developing High-Rise Mixed-Use Projects"

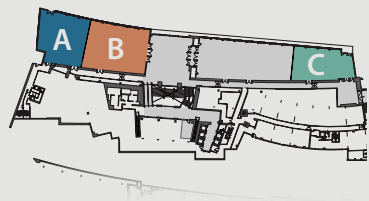
**Natalie Slessor**  
General Manager of Workplace and Change, Lendlease Corporation

"The Psychology of Place"

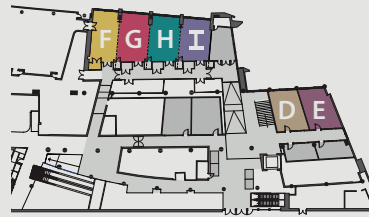


# Day 1 Sydney Session 3

Monday 30 October  
1:45 p.m. – 3:15 p.m.



Mezzanine Floor



Ground Floor

## Speaker Order

Session Chair	1
2	3

## 3A Urban Scale Infrastructure

*Refer to Book of Abstracts page 39*

More than the design of individual structures, urban scale infrastructure considerations are critical to the successful future of all cities, particularly as they continue to densify. This session considers the best approaches to urban scale infrastructure, using Sydney as a case study. Particular emphasis is placed on transit and water infrastructure as well as new performance-based approaches to infrastructure planning.



**Chair:** Clare Swan  
*Director, JBA Urban Planning Consultants Pty Ltd*

**Laurane de Gendre**  
*Transport Planner, AECOM*  
"A 24-Hour City"

**Douglas Voigt**  
*Partner, Skidmore, Owings & Merrill LLP*

"New South Wales at 10 Million:  
What Comes Next?"

**Bas Nolte**, *Global Business Development Manager High Rise Drainage Solutions, Aliaxis*

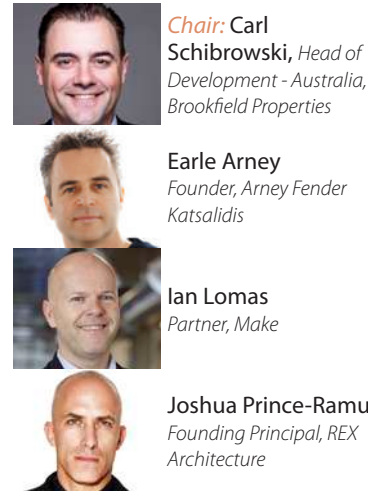
"Water Management in Vertical Cities, With the Goal of Reduced Water Footprint"

## 3B Connecting the City: A Global Perspective

*Refer to Book of Abstracts page 61*

To be a "connected" city is not just a measure of physical urban infrastructure, but of economic, social, and digital linkages as well. The best development projects around the world take all of these factors into consideration and more, harnessing the unique strengths of each locale to achieve a more holistic understanding of connectivity. In this session, three high-profile architects share their takeaways from applying principles of connectivity on a global scale.

### Panel Discussion



**Chair:** Carl Schibrowski, *Head of Development - Australia, Brookfield Properties*

**Earle Arney**  
*Founder, Arney Fender Katsalidis*

**Ian Lomas**  
*Partner, Make*

**Joshua Prince-Ramus**  
*Founding Principal, REX Architecture*

## 3C Tall Timber

*Refer to Book of Abstracts page 81*

Tall timber high-rises are emerging as a significant innovation in skyscraper structural engineering. New structures around the world are illustrating the environmental and cost benefits of timber, while proving its durability and safety. This session will explore specific tall timber developments, including 25 King in Brisbane, TallWood House at Brock Commons in Vancouver, and Framework in Portland.



**Chair:** Terri Meyer Boake  
*Professor, University of Waterloo*

**Philip Vivian**  
*Director, Bates Smart*

"The Tall Timber Office: A Tale of Two Buildings in Australia"

**Robert Foster**  
*Senior Lecturer, University of Queensland*

"Rethinking CTBUH's Height Criteria in the Context of Tall Timber"

**CTBUH Research Project**

**Thomas Robinson**  
*Principal, LEVER Architecture*

"Framework: The Tallest All-Timber Building in the Americas"

## 3D Transit-Oriented Development: Australia

*Refer to Book of Abstracts page 103*

This session explores several ongoing transit oriented developments in detail, with an emphasis on projects in Australia. Profiled developments highlight transit improvements meant to spur new urban growth, as well as residential and office developments that take advantage of existing rail lines. Additional focus is placed on design constraints in densely built environments.



**Chair:** Jeff Morgan  
*Associate Principal, Grimshaw Architects*

**Frank Cerra**  
*Managing Director, BG&E*

"MetroWest Rail – Connecting Communities"

**Ramin Jahromi**  
*Director, Cox Architecture*

"The Architecture of Leftover Spaces – Elevating Urban Infrastructure"

**Donald McNeill**  
*Professor, University of Western Sydney*

"Towards a Volumetric Urbanism: Governing Underground & Vertical Space"



3E

## Structural Engineering

Refer to Book of Abstracts page 123

Technical advancements continue to push the boundaries of structural engineering, allowing for taller, skinnier, and more resilient high-rises. This session explores some of the most recent advances in structural engineering, including viscous wall dampers and the challenging design of Merdeka PNB118 in Kuala Lumpur. It will conclude with a discussion of structural resiliency, and whether it is a sustainable practice.



**Chair:** Meg Redwin  
Executive Director, Multiplex

**SawTeen See** & **Simon Cloherty**  
Managing Partner, Leslie E. Robertson Associates & Principal, Robert Bird Group

"Structural Design Challenges of Merdeka PNB118, Kuala Lumpur, Malaysia"

**Honglei Wu**, Deputy Chief Engineer, Tongji Architectural Design (Group) Co., Ltd.

"Research and Application of Viscous Damping Walls in High-Rise Buildings"

**Donald Davies**  
President, Magnusson Klemencic Associates

"Resilient Design Optimization – An Oxymoron or a Reality?"

3F

## Density and Urbanity in the Sydney Context

Refer to Book of Abstracts page 143

Through a combination of new developments in the CBD and other commercial districts and the intensification of Sydney's rail transit, the city is undergoing a profound transformation in density and urbanity. The impacts of increased urbanization on the city's heritage and culture, as well as its built environment, are considered by a panel of experts, representing urban planners and architects.

### Panel Discussion



**Chair:** Richard Palmer  
Director, Sustainability, WSP

**Graham Jahn**  
Director of City Planning, Development & Transport, City of Sydney

**Ken, McBryde**  
Director, Sydney Architecture Studio

**Kim Nielsen**  
Founder, Principal, & Creative Director, 3XN

**Tanya Vincent**  
Principal Manager, Urban Design, Transport for NSW

3G

## Smart Technologies

Refer to Book of Abstracts page 161

Through a series of case studies and built examples, this session explores state-of-the-art technologies and trends that are transforming how tall buildings are designed and how people interact with the built environment. Discussions focus on how the Internet of Things and integrated technologies are being applied to Australia's top developments. Also in focus will be the German Passivhaus energy efficiency standard and how it can benefit Australian markets.



**Chair:** Santeri Suoranta  
Director, High Rise Platforms, Major Projects, KONE

**Richard Morrison**, Practice Lead - Information Communications Technology, AECOM  
"How the Internet of Things (IoT) Can Make "Smart" Building Brilliant"

**Shonn Mills**  
Director, Ramboll Group  
"What is a Smart High-Rise? Integrating Technology and Tall Buildings"

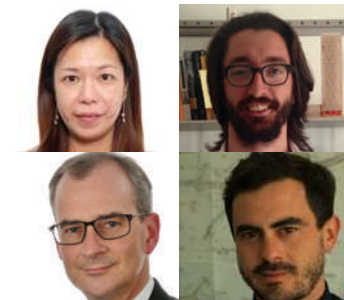
**Johanna Trickett**  
ESD Consultant, Aurecon  
"PassivHaus – The Standard for High-Comfort, Low-Energy and High-Quality Construction"

3H

## Public Realm: Interior Systems

Refer to Book of Abstracts page 179

In order for public interiors to be successful, the buildings housing such spaces must be outfitted with the appropriate infrastructure, especially in the realm of vertical transportation. This session begins with an update on a current, industry-funded CTBUH research project, before moving on to the advancement of multi-direction elevator technology and an investigation into multi-level cities and habitable sky bridges.



**Chair:** Winnie Cheung, Business Development Director, AET Flexiblespace

**Dario Trabucco**, Research Manager, Council on Tall Buildings and Urban Habitat  
"Century-Old Urban Visions Come True: Rope-Less Elevators for the City of Tomorrow"  
**CTBUH Research Project**

**Markus Jetter**  
Head of Product Development, thyssenkrupp  
"A Next-Generation Vertical Transportation System Under Testing"

**Michael Olitsky**  
Vice President, Gdalia Olitsky Engineering LTD  
"Elevated Sustainable Urban Systems and Habitable Bridges"

3I

## The Residential Experience

Refer to Book of Abstracts page 201

Although high-rise living has been a staple of some cities since the advent of skyscrapers in the 19th century, close attention has only been paid in recent decades to the sociological and psychological challenges of living in the sky. The high-rise residential experience will be examined from the perspective of developers and designers to uncover how changing design trends can positively impact high-rise residents by creating a sense of community and providing services and amenities across entire buildings.



**Chair:** Louisa Carter  
South East QLD City Executive, Arcadis

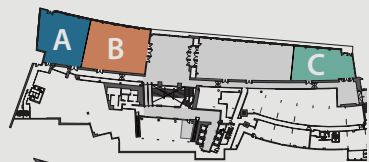
**Andrew Liu**, Vice President; Service Leader, Global Excellence Center, CallisonRTKL  
"Life in the Sky: Community and Connectivity in Residential High-Rises"

**Raymond Cheah Ho Chee**, Chief Operating Officer, Commercial, UEM Sunrise Berhad  
"Aurora Melbourne Central – Melbourne CBD's Tallest and Most Significant Mixed-Use Development"

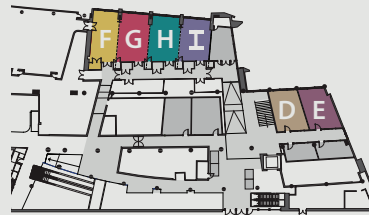
**Guy Lake**  
Director, Bates Smart  
"Sydney Olympic Park: Creating Livable Density from a Sporting Legacy"

# Day 1 Sydney Session 4

Monday 30 October  
3:45 p.m. – 5:15 p.m.



Mezzanine Floor



Ground Floor

## Speaker Order

Session Chair	1
2	3

4A

## Connected Buildings and Urban Mobility

Refer to Book of Abstracts page 43

New physical and digital technologies are revolutionizing how tall buildings connect with our cities, transforming how urban inhabitants interact with the built environment, inside and out. Presentations here survey this phenomenon at all scales, examining large transit-based design strategies, the smart integration of elevators and escalators in tall buildings, and the immense opportunities created by the Internet of Things with respect to the occupant experience and real-time data analytics.



**Chair:** Ame Engelhart, Director - Hong Kong, Skidmore, Owings & Merrill LLP

**Fred Clarke**, Senior Design Principal, Pelli Clarke Pelli Architects

"Humanizing Infrastructure: How Large-Scale, Transit-Based Urban Design Contributes to a Vibrant City"

**Michael Nilles**  
Chief Digital Officer, Schindler

"Smart Urban Mobility"

**Peter Halliday**, Global Head, Building Performance and Sustainability, Siemens Building Technology

"Creating Connected Places Through the Power of Building Data"

4B

## Circular Quay Tower: Aligning Private & Public Outcomes

Refer to Book of Abstracts page 65

Circular Quay Tower is an exceptional example of the private and public sectors working together to transform an area, breathing new life into George Street and giving Circular Quay a stronger identity. Hear from representatives of the tower's developer, architect, and governing authority as they discuss the public value that has been unlocked at the ground plane in this important part of Sydney.

### Panel Discussion



**Chair:** David Rolls  
National Development Director, Lendlease Corporation

**Kimberley Jackson**  
Project Director, Lendlease Corporation

**Graham Jahn**  
Director of City Planning, Development & Transport, City of Sydney

**Ross Palmer**  
Senior Partner, Foster + Partners

4C

## Vertical Schools

Refer to Book of Abstracts page 85

Schools are increasingly being adapted to urban environments through the introduction of vertical campuses across major cities at all educational levels. Australia in particular has embraced the vertical school typology, and presentations in this session focus on specific projects in Adelaide and Sydney. Additionally, questions of security, student safety, and access control will be discussed.



**Chair:** Karen Wong  
Associate Director, Bates Smart

**Shu-Hsin Soong**, Technical Director & Education Sector Leader, AECOM  
"Vertical Schools - Are They on the Up?"

**Andrew Cortese**  
Partner, Grimshaw Architects

"Architecture for Pedagogy and Urban Intensification: Designing the Future"

**Camille Lattouf**  
Associate, Urban Planner, Architectus

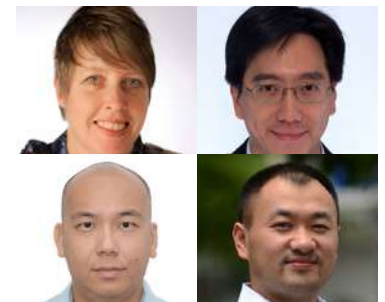
"Rethinking Schools: A Case for the Efficient Use of School Campuses"

4D

## Transit-Oriented Development: Asia

Refer to Book of Abstracts page 107

Asian cities consistently lead the way in creating innovative transit oriented developments (TOD), with projects from recent decades serving as inspiration for similar developments around the world. New experiments in this realm, profiled in this session, are continuing to push the transit envelope. Further, transit oriented development guidelines are being put in place in countries like China that further solidify TOD design practices.



**Chair:** Aicha Woods  
Senior Principal, Pelli Clarke Pelli Architects

**Sam Lai**, Project Director and General Manager, Sun Hung Kai Properties Limited

"Innovation, Connectivity & Coherence – Building Homes with Heart by Riding on the Railway Network"

**Mulyadi Janto**  
Director, PT Farpoint Prima

"Connecting Nine Buildings in Central Jakarta Together with the MRT"

**Yin Jia**  
Founder, EFC Engineering Consulting  
"TOD Planning in China: Problems and Solutions"

4E

## Modular Construction: A Conversation

Refer to Book of Abstracts page 127

This panel brings together leading minds from engineering, construction, and academic backgrounds to discuss the future of modular construction. The wide-ranging conversation will hit on a number of topics related to modular construction in order to fully consider the impact of this growing strategy, including sustainability and efficiency, fire and life safety, cost effectiveness, and construction management.

### 20|20 Panel Discussion



**Chair:**  
**Matthew Davey**  
Lead Structural Engineer,  
Multiplex



**Yu Bai**  
Associate Professor,  
Monash University



**Philip Gardiner**  
Managing Director,  
Irwinconsult Pty.



**Rob Johnson**  
Customer & Market  
Relationship Manager,  
Liberty OneSteel



**James Murray-Parkes**  
Science & Engineering  
Director, Multiplex Engineering  
Innovations Group

4F

## Skyline Iconography

Refer to Book of Abstracts page 145

Tall towers are not built in a vacuum, and cities, particularly those with rich historical heritage, often struggle to rectify the benefits of new towers with the desire for preservation. As a result, skyline iconography has become a pressing issue in many European cities, with a number of different approaches illustrated across cities. 22 Bishopsgate will also be examined as a case study on London's approach to integrating towers in the skyline.



**Chair:** Vincent Tse, Managing Director,  
Building MEP, China Region, WSP

**Eric Parry**  
Founder and Principal, Eric Parry Architects  
"To Cluster or Stand Apart?"

**Karen Cook**  
Founding Partner, PLP Architecture  
"22 Bishopsgate: Designed to Stimulate the Individual"

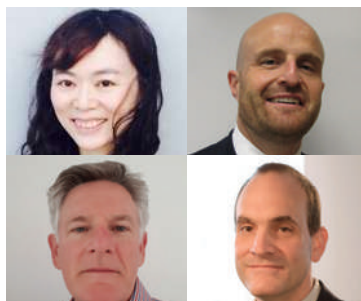
**Kamran Moazami** & **Nick Offer**  
Head of Discipline, Building Structures, WSP  
Director / Head of MEP, WSP  
"22 Bishopsgate: Combining Well-Being with a Connected, Sustainable Structural Solution"

4G

## SMART Case Studies

Refer to Book of Abstracts page 165

On their own, smart technologies are compelling innovations, but they are best understood and appreciated when considered in specific building applications. Therefore, this session focuses on tall building case studies showcasing smart technologies, including New Zealand Sky City in Auckland and Australia 108 in Melbourne. A concluding presentation will consider approaches to smart lobby design across case studies.



**Chair:** Zhizhe Yu  
Co-Founder and Managing Director, AI.

**Arron Money**, Executive Manager,  
SKYCITY Entertainment Group  
"Sky Tower's Modernization Success"

**Peter Hodgins**, AP Watson IoT EAM  
Executive, IBM  
"The Future of Smart Buildings in the Cognitive Era"

**Steve Gonzalez**  
Director, Major Projects, Americas, KONE  
"Improving the Value of Buildings Through a Smart Lobby Approach"

4H

## Public Realm: Exterior

Refer to Book of Abstracts page 183

Designing successful outdoor public realms, particularly in relation to tall buildings, is one of the most challenging tasks for designers and urban planners. Too often, spaces lack the character and connectivity required to make the leap from "space" to "place." However, numerous examples from around the world point the way to successful public exteriors. These will be studied in detail to better understand the process of placemaking.



**Chair:** Ilkay Can-Standard  
Founder, GenX Consultants

**Grant Marani**  
Partner, Robert A.M. Stern Architects  
"Making Spaces Into Places"

**Daniel Kaplan**  
Senior Partner, FXFOWLE Architects  
"Five Points of a Sustainable Urbanism"

**Michael Bischoff**  
Partner, Pei Cobb Freed & Partners  
"The Landmark: Urban Aggregation & Shaping Public Space"

4I

## The Retail Experience

Refer to Book of Abstracts page 205

Strong retail programming continues to be a major driver of urban development, bringing investment and foot traffic to a given project. However, the way that retail components are incorporated into developments is evolving in response to a number of factors, including changing shopping habits, transit-oriented development, and new combinations of programming within developments.

### 20|20 Panel Discussion



**Chair:**  
**Eric Lagerberg**, Global  
Practice Group Leader,  
Retail, CallisonRTKL



**Rosemary Condron-Calic**  
National Portfolio  
Manager, Retail Services,  
ISPT



**Mounib Hammoud**  
CEO, Jeddah Economic  
Company



**Narelle Hutchins**  
Head of Place Strategy  
and Design, AMP  
Capital Investors



**Ken Knox**  
Development Director,  
Retail and Mixed Use  
Development, GPT



# Day 2 Sydney: Program Overview

Tuesday 31 October

8:00 a.m. – 9:00 a.m.

Arrival & Breakfast, Sponsored by CPP Wind Engineering Consultants

## Session 5

9:00 a.m. – 10:45 a.m.

| See pg 7 |

Brief Presentation of Awards

- International Student Design Competition
- Research Seed Funding
- Traveling Design Research Studio
- Student Research Funding

Chairman Handover Ceremony



**David Malott**  
CTBUH Chairman /  
Founder and CEO, AI



**Steve Watts**  
CTBUH Chairman-Elect /  
Partner, alinea consulting

Plenary 2

Panel Discussion



**The Future of the Workplace**



**Chair: Steve Watts**  
CTBUH Chairman-Elect /  
Partner, alinea consulting

10:45 a.m. – 11:15 a.m.

Coffee Break, Sponsored by Ramboll

## Track A: Urban Policy & Planning

## Track B: Building for People

## Track C: Re-Thinking Typologies

## Track D: Transit-Oriented Development

### 6A Urban vs. Suburban



**Chair: Natasha Epstein**  
Senior Associate, CollinsWoerman

**Peng Du**, China Office Director / Academic Coordinator, CTBUH

**Lester Partridge**  
Director, LCI (Aust) Pty Ltd.

**David Pontarini**  
Principal, Hariri Pontarini Architects

### 6B Livability



**Chair: Nirit Rosenstein**  
Executive, Real Estate Development Fund

**Richard Fennell**, International Director, International Director, Head of Property and Asset Management, Australia, JLL

**Rosemary Kennedy**, Adjunct Associate Professor, Queensland University of Technology

**Chris Hayton**  
Principal, Rothelowman

### 6C Engineering for Threats



**Chair: David Scott**, Lead Structural Director, Laing O'Rourke

**John Viise**  
Associate Principal, Thornton Tomasetti

**Simon Lay**  
Director, Olsson Fire & Risk

**Myung Sik Lee**  
Professor, Dongguk University

### 6D Transit-Oriented Development: Europe



**Chair: Manuela Belova**, Architect & Founding Partner, Vertical Alignment Architects

**Chris Williamson**  
Founding Partner, Weston Williamson+Partners

**Roland Bechmann**  
Partner, Werner Sobek Group

**Earle Arney**  
Founder, Arney Fender Katsalidis

12:45 p.m. – 1:45 p.m.

Lunch, Sponsored by Autodesk

## Session 7

1:45 p.m. – 3:15 p.m.

Concurrent Tracks + Q & A

| See pg 20-21 |

Also occurring at this time:

2017 Traveling Design Studio student presentations in Room J, see page 23

### 7A Tall Buildings & Contextual Issues



**Chair: Hana Kassem**  
Director, Kohn Pedersen Fox Associates

**Amin Hamzavian**  
Director, AvLaw Pty Ltd

**Giorgio Marfella**, Lecturer - Construction Management and Architecture, University of Melbourne

**Ian Briggs**, Director, & **Jaimin Atkins**, Director, Plus Architecture

### 7B Greening the Vertical Realm



**Chair: Liz Westgarth**  
Principal, HASSELL

**Alfredo Ramirez**, Codes and Advisory Services Manager, Underwriters Laboratories

**Luke Leung**  
Director, Skidmore, Owings & Merrill LLP

**Mary Casey**  
Director, Social Infrastructure, HKA

### 7C Considering the Whole Life Cycle



**Chair: Shelley Finnigan**  
Global Technical Sales Engineer, ArcelorMittal

**Leslie Robertson**  
Founder, Leslie E. Robertson Associates

**Rick Kreeck**  
Associate Director, BG&E

**Scott Wheeler**  
Associate Director, Robert Bird Group

### 7D Transit-Oriented Development: Implementation

**Chair: Fred Clarke**, Senior Design Principal, Pelli Clarke Pelli Architects

**Steven Driscoll**  
CEO, UrbanGrowth NSW Development Corporation

**Louise Mason**  
COO - Real Estate, AMP Capital Investors

**Steve Newton**, National Transit Management & Top Range Manager, Schindler

**Tanya Vincent**  
Principal Manager, Urban Design, Transport for New South Wales

20/20 Panel Discussion

3:15 p.m. – 3:45 p.m.

Coffee Break, Sponsored by Cox Architecture

## Session 8

3:45 p.m. – 5:30 p.m.

| See pg 7 |

Plenary 3



**The Future of Connected Cities and Skyscrapers**



**Chair: Tim Neal**  
CTBUH Trustee / President & CEO, CallisonRTKL



Keynote 1:

**Elizabeth Farrelly**  
Associate Professor, Australian School of Urbanism

"Green or Greed: Density-Done-Well or Developer Free-for-All?"

6:00 p.m. – 9:00 p.m.

The Calyx Garden Party (Sydney Royal Botanic Garden), Hosted by CTBUH & Sponsored by BG&E; Coaches Depart from the Hotel's Lower Ground Floor at 5:30pm, see page 26





**Keynote 1:**  
**Anthony Henry**, Head of Workspace Design, Macquarie Group



**Keynote 2:**  
**Robbie Robertson**  
 Partner | Experience Design, Deloitte Consulting



**Keynote 3:**  
**Jennifer Saiz**, Head of Group Property, Commonwealth Bank of Australia



**Keynote 4:**  
**Cameron Scott**  
 Chief Operating Officer - Corporate Solutions, JLL



**Keynote 5:**  
**David Malott**  
 CTBUH Chairman / Founder and CEO, AI.

## Track E: Advanced Construction & Engineering

### 6E Façades



**Chair:** Julia Felmeri  
 Vice President, Brookfield Properties

**Jennifer Schneider**, Structural & Security Glazing Segment Manager, Trosifol

**Matt Breidenthal**  
 Senior Vice President, HOK

**Matthias Roik**  
 Research & Development, HALFEN

## Track F: Creating Competitive Cities

### 6F International Development Capital Flows

**Chair:** Charu Thapar  
 CTBUH Trustee / Managing Director, JLL

**Raymond Cheah Ho Chee**  
 Chief Operating Officer, Commercial, UEM Sunrise Berhad

**Chris Kakoufas**  
 General Manager, Development, Cbus Property

**Mark Tait**  
 Group Executive & Head of Commercial Development, Investa Property

**Steve Watts**  
 CTBUH Chairman-Elect / Partner, alinea consulting

20/20 Panel Discussion

## Track G: Smart Tall Buildings

### 6G Digital Platforms



**Chair:** Max Alfthan, Executive Vice President, Marketing and Communications, KONE

**Anthony Hauck**  
 Director of Product Strategy, Autodesk

**Severine Chapus**, Vice President of Strategy & Digital Transformation Cross Industry Initiatives, Dassault Systemes

**Joshua Ridley**  
 Founder & CEO, Ridley

## Track H: Public Realm

### 6H Ground Plane Environmental Considerations



**Chair:** Isabel Gonzalez, Research & Development Director, thyssenkrupp

**Seifu Bekele**, Principal Engineer, Global Wind Technology Services

**Charles Stone II**  
 President, Fisher Marantz Stone

**Aaron Lefcovitch**  
 Associate Director, Windtech Consultants Pty Ltd

## Track I: The Human Experience – In & Around Tall Buildings

### 6I The Workplace Experience



**Chair:** Kenneth Turner  
 Director, CallisonRTKL

**Martin Henn**  
 Partner, Design Director, HENN

**Ken McBryde**  
 Director, Sydney Architecture Studio

**Debra Eckersley**  
 Partner, PricewaterhouseCoopers

### 7E Materials / Systems



**Chair:** Angela Wang  
 Design Manager, Multiplex

**Jean-Claude Gerardy**  
 Manager, ArcelorMittal

**Steven White**  
 Technical Director, Stucor Limited

**Sam McKechnie**, Building Solutions Designer Engineer, Stucor Australia Pty Ltd

### 7F Case Studies: International Icons



**Chair:** Robert Halvorson  
 Global Head of Structures/Executive Vice President, WSP

**Jeffrey Smilow**  
 USA Director of Building Structures, WSP

**De Ming (Derry) Yu**, Project Director - Project Management, New World China Land

**Alper Dilek**, Head of Architectural Design Department, Ronesans Holding

### 7G Smart Building Solutions

**Chair:** Dan Brooks  
 Director, Corporate Sales - Americas, KONE

**Sascha Brozek**  
 Senior Vice President, Major Projects, KONE

**Brett Casson**  
 Global Digital Infrastructure Leader, Autodesk Autodesk

**Peter Halliday**, Global Head, Building Performance and Sustainability, Siemens Building Technology

**John MacLeod**  
 IoT Specialist, IBM

20/20 Panel Discussion

### 7H International Case Studies



**Chair:** Cathy Hayes  
 Principal, Ridley

**Tengku Dato' Ab Aziz Tengku Mahmud**  
 Chief Executive Officer, PNB Merdeka Ventures Sdn. Bhd.

**Michele Pasca di Magliano**  
 Associate Director, Zaha Hadid Architects

**Ian Smith**, Vice President, Special Projects, Asia Pacific, thyssenkrupp

### 7I The Well-Being Experience



**Chair:** Stephen Taylor  
 City Executive - Sydney, Arcadis

**Swinal Samant**, Senior Lecturer, National University of Singapore

**Christopher Colasanti**  
 Associate Partner, Jaros, Baum & Bolles

**Glan Blake Thomas**  
 Director, AET Flexiblespace



**Keynote 2:**  
**Karl Fender**, Managing Principal, Fender Katsalidis Architects  
 "The Future of the Australian Skyscraper"



**Keynote 3:**  
**Ivan Harbour**  
 Senior Partner, Rogers Stirk Harbour + Partners  
 "The Human-Scaled Future of Dense Development"



**Keynote 4:**  
**Antony Wood**  
 CTBUH Executive Director  
 "Vertical Cities of the Future"

Core Sydney Conference Closing [see pg 25](#)  
 Grand Ballroom (immediately following Plenary 3)

Conference Co-Chairs:

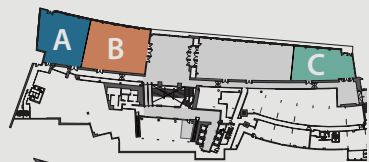


CTBUH 2018 Conference Launch [see pg 39](#)  
 Grand Ballroom (immediately following Plenary 3 & Closing)

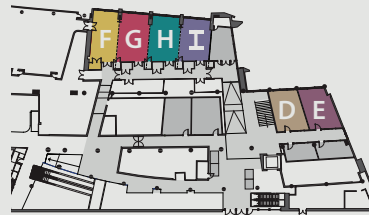


# Day 2 Sydney Session 6

Tuesday 31 October  
11:15 a.m. – 12:45 p.m.



Mezzanine Floor



Ground Floor

## Speaker Order

Session Chair	1
2	3

## 6A Urban vs. Suburban

*Refer to Book of Abstracts page 47*

Urbanized areas are generally considered to be more sustainable than their suburban counterparts; however, much of the gains in efficiency are related to a concentration of infrastructure services. This session will consider how to approach urbanization from this context, examining the benefits of urban environments, the possibility of net-zero carbon skyscrapers, and designing for families in the vertical realm.



**Chair:** Natasha Epstein  
*Senior Associate, CollinsWoerman*

**Peng Du**, China Office Director & Academic Coordinator, CTBUH

"Downtown High-Rise vs. Suburban Low-Rise Living: A Pilot Study on Urban Sustainability"

[CTBUH Research Project](#)

**Lester Partridge**  
*Director, LCI (Aust) Pty Ltd.*  
"Why Precincts are the Answer to Zero-Carbon Buildings"

**David Pontarini**  
*Principal, Hariri Pontarini Architects*  
"Helping Cities Plan High-Rise Growth"

## 6B Livability

*Refer to Book of Abstracts page 67*

Developers, city planners, and architects alike all recognize the importance of designing for livability in cities; however, "livability" as a quantifiable metric is hard to define, and therefore difficult to account for and incentivize in developers' ROI analyses and urban planners' code prescriptions. Rather than focus on established ideas of how to create livable spaces, this session turns the spotlight to practical implementation from an investment and regulatory standpoint.



**Chair:** Nirit Rosenstein  
*Executive, Real Estate Development Fund*

**Richard Fennell**, International Director, Head of Property and Asset Management, Australia, JLL

"Recasting Highest and Best-Use Property Principles to Drive People-Centric Cities"

**Rosemary Kennedy**, Adjunct Associate Professor, Queensland University of Technology  
"Critical Subtropical Urban Design Analysis of Brisbane's New Apartment Buildings"

**Chris Hayton**  
*Principal, Rothelowman*  
"Making Livability Pay for Itself"

## 6C Engineering for Threats

*Refer to Book of Abstracts page 89*

As skyscrapers become more complex, the potential threats to their safety, including seismic, fire, and security, are magnified. Novel trends in performance-based design have revolutionized how complex skyscrapers are authorized and permitted, reflecting a growing acceptance that prescriptive code-based solutions to tall building safety do not go far enough. Recent disasters, such as Grenfell in London and the Torch in Dubai, make this even more imperative.



**Chair:** David Scott  
*Lead Structural Director, Laing O'Rourke*

**John Viise**  
*Associate Principal, Thornton Tomasetti*  
"An Overview of CTBUH's New Performance-Based Seismic Design for Tall Buildings Publication"  
[CTBUH Research Project](#)

**Simon Lay**  
*Director, Olsson Fire & Risk*  
"Square Pegs & Round Holes: Bridging the Gap Between International Codes and Local Expectations"

**Myung Sik Lee**  
*Professor, Dongguk University*  
"Performance of the Foldable Fire-Evacuation Staircase for High-Rise Residents"

## 6D Transit Oriented Development : Europe

*Refer to Book of Abstracts page 111*

Europe's approach to transit-oriented development reflects the character of European cities, which tend to be smaller and more densely settled than American counterparts. Therefore, projects profiled in this session examine the role of transit in facilitating this density, while also respecting the established character of cities and exploring new ways to integrate transit with residential and office developments.



**Chair:** Manuela Belova, Architect & Founding Partner, Vertical Alignment Architects

**Chris Williamson**, Founding Partner, Weston Williamson+Partners  
"Transport-Oriented Design and the New Garden City"

**Roland Bechmann**  
*Partner, Werner Sobek Group*  
"Stuttgart 21: How a New Main Station Multiplies the Potential for Inner-City Urban Development"

**Earle Arney**  
*Founder, Arney Fender Katsalidis*  
"denseCITY"

## 6E Façades

Refer to Book of Abstracts page 129

As the major building element directly exposed to the elements, façades are increasingly designed with an eye towards resiliency in the face of major wind or seismic events. These advances in façade design will be profiled and considered, along with technical innovations that are allowing façades to be built with greater complexity at larger scales.



**Chair: Julia Felmeri**  
Vice President, Brookfield Properties

**Jennifer Schneider**  
Structural & Security Glazing Segment Manager, Trosifol

"Cyclone-Resistant Curtain Walls for the Resiliency of Buildings & Cities"

CTBUH Research Project

**Matt Breidenthal**  
Senior Vice President, HOK

"Optimization of Integrated Structural Façades Across Multiple Building Shapes and Locations"

**Matthias Roik**  
Research & Development, HALFEN

"Fixing 'Heavy' Façades in Seismic Zones: Is There an Alternative to Steel and Glass?"

## 6F International Development Capital Flows

Refer to Book of Abstracts page 149

With an unprecedented international flow of capital across traditional geographic boundaries enabling the construction of high-rises around the world, our cities are becoming more interconnected than ever before. This 20|20 Panel Discussion will explore the unprecedented amount of international real estate investment crossing boundaries over the past few years, with an emphasis on the Australia market.

### 20|20 Panel Discussion



**Chair:**  
**Charu Thapar**  
Managing Director, JLL



**Raymond Cheah Ho Chee**, Chief Operating Officer, Commercial, UEM Sunrise Berhad



**Chris Kakoufas**  
General Manager, Development, Cbus Property



**Mark Tait**, Group Executive & Head of Commercial Development, Investa Property



**Steve Watts**  
CTBUH Chairman-Elect / Partner, aline consulting

## 6G Digital Platforms

Refer to Book of Abstracts page 169

The major advances in digital platforms and technology over the years have profoundly impacted the tall building industry, enabling whole new forms of digital design and construction. These innovative development tools are aiding in the transformation of cities by providing extensive performance data, city-wide 3D simulations, and rapid-response platforms.



**Chair: Max Alfthan**, Executive Vice President, Marketing and Communications, KONE

**Anthony Hauck**  
Director of Product Strategy, Autodesk  
"Growing New Cities: Generative Design and the Future of Urban Environments"

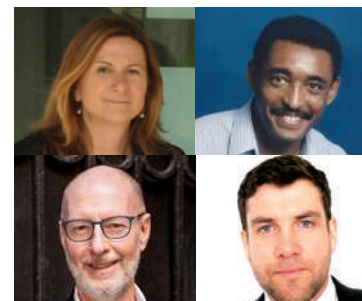
**Severine Chapus**, Vice President of Strategy & Digital Transformation Cross Industry Initiatives, Dassault Systemes  
"Virtually Connected Cities"

**Joshua Ridley**  
Founder & CEO, Ridley  
"Digital Design & Construction – Delivering the Intelligent Built Environment"

## 6H Ground Plane Environmental Considerations

Refer to Book of Abstracts page 187

Tall buildings have an outsized impact on a city's ground plane environment, and new techniques are being developed to understand the scope of that impact, and to develop ways to mitigate any negative consequences that a tower might have on a city's ground plane. Particular emphasis is placed on the role of light pollution and overshadowing, and how those issues impact the city.



**Chair: Isabel Gonzalez**, Research & Development Director, thyssenkrupp

**Seifu Bekele**, Principal Engineer, Global Wind Technology Services  
"City Square Green Design"

**Charles Stone II**  
President, Fisher Marantz Stone  
"City Light: Pieces, Places and Postcards"

**Aaron Lefcovitch**, Associate Director, Windtech Consultants Pty Ltd  
"Prediction and Mitigation of the Solar Reflectivity Impacts of Tall Buildings"

## 6I The Workplace Experience

Refer to Book of Abstracts page 207

The workplace of the future is upon us, with employee well-being becoming a major priority for companies with the desire to attract top talent. Presentations in this session explore how new office developments are rejecting traditional notions of the high-rise workplace to create flexible environments that are based on porous spatial structures and connectivity across levels.



**Chair: Kenneth Turner**  
Director, CallisonRTKL

**Martin Henn**  
Partner, Design Director, HENN  
"Future Work Environments"

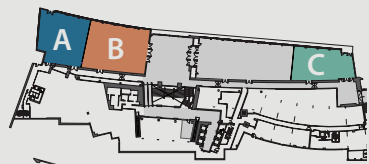
**Ken McBryde**  
Director, Sydney Architecture Studio  
"The Agile Building – New Connections in the Vertical City"

**Debra Eckersley**  
Partner, PricewaterhouseCoopers  
"Triggering New Expectations – Reimagining New Client and People Experiences"

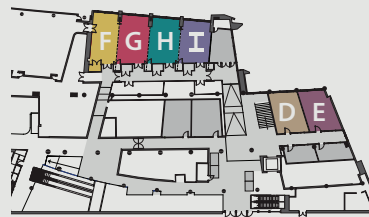


# Day 2 Sydney Session 7

Tuesday 31 October  
1:45 p.m. – 3:15 p.m.



Mezzanine Floor



Ground Floor

## Speaker Order

Session Chair	1
2	3

## 7A Tall Buildings & Contextual Issues

Refer to Book of Abstracts page 51

Although it is common knowledge that skyscrapers are not built in a vacuum, but rather must conform to their context and surroundings, many are unaware of the challenges involved in that process. Specific contextual challenges will be discussed in this session, including the particulars of aviation law and the tension between designing icons and buildings that are appropriate for their location.



**Chair:** Hana Kassem  
Director, Kohn Pedersen Fox Associates

**Amin Hamzavian**  
Director, AvLaw Pty Ltd

"The Aviation and Property Development Nexus: Aeronautical Impacts of Tall Buildings"

**Giorgio Marfella**, Lecturer - Construction Management and Architecture, University of Melbourne

"Past Forward: How Australian Vertical Urbanism Can Learn from its Tall Building Heritage"

**Ian Briggs**, Director, & **Jaimin Atkins**, Director, Plus Architecture

"Designing the Iconic Versus Designing the Connected: Lessons from Australia & New Zealand"

## 7B Greening the Vertical Realm

Refer to Book of Abstracts page 71

The concepts of vertical greenery and its sustainable outcomes are no longer novel. New research on the subject has moved past basic questions of its application to more detailed analyses on gaps in prescriptive and performance requirements, movement towards "net-zero carbon" structures, and new benchmarking concepts, all of which will be discussed in detail.



**Chair:** Liz Westgarth  
Principal, HASSELL

**Alfredo Ramirez**, Codes and Advisory Services Manager, Underwriters Laboratories

"Grasping Green Requirements & Gaps in Application"

**CTBUH Research Project**

**Luke Leung**  
Director, Skidmore, Owings & Merrill LLP

"New Net-Zero Matrix – Including Nature in Tall Buildings"

**Mary Casey**  
Director, Social Infrastructure, HKA

"What if We Used Nature as the Benchmark for Performance?"

## 7C Considering the Whole Life Cycle

Refer to Book of Abstracts page 93

Durability and resiliency are major components of a successful high-rise that have taken on greater importance as more attention is paid to the whole life cycle of a building. There are many ways to ensure a long building lifespan, including condition monitoring and refurbishment, but nothing is more important than sound structural engineering and the critical thought process behind realizing an architect's vision.



**Chair:** Shelley Finnigan  
Global Technical Sales Engineer, ArcelorMittal

**Leslie Robertson**  
Founder, Leslie E. Robertson Associates

"Vertical Engineering: Lessons"

**Rick Kreeck**  
Associate Director, BG&E  
"Building Service Life: Extending Beyond Design Life"

**Scott Wheeler**  
Associate Director, Robert Bird Group

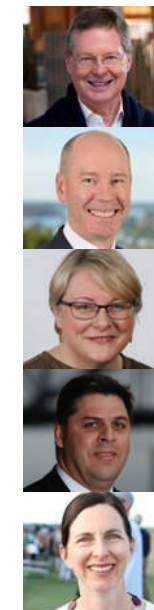
"Wynyard Place, Sydney – Structural Engineering Overview"

## 7D Transit-Oriented Development : Implementation

Refer to Book of Abstracts page 115

The benefits of transit-oriented development transcend geographic context, despite legitimate differences in how cities around the globe approach the concept. However, one constant is the requirement for effective implementation, regardless of context. This panel discussion brings together planning and transit leaders to consider the best routes to realizing transit-oriented development.

## Panel Discussion



**Chair:**  
**Fred Clarke**  
Senior Design Principal, Pelli Clarke Pelli Architects

**Steven Driscoll**  
CEO, UrbanGrowth NSW Development Corporation

**Louise Mason**  
COO - Real Estate, AMP Capital Investors

**Steve Newton**  
National Transit Management & Top Range Manager, Schindler

**Tanya Vincent**  
Principal Manager, Urban Design, Transport for New South Wales



## 7E Materials / Systems

Refer to Book of Abstracts page 133

Tall building materials and systems are constantly evolving to reflect the latest innovations in design and engineering, and these often-overlooked details are fundamental to achieving a successful building, both from a resiliency and user-experience perspective. This session will explore details in steel production, MEP design, and noise reduction to investigate the evolution of tall building systems.



**Chair:** Angela Wang  
Design Manager, Multiplex

**Jean-Claude Gerardy**  
Manager, ArcelorMittal

"High Strength Web Tailor-Made (WTM) to Complement Jumbo Shapes for Supertall & Slender Buildings"

**Steven White**  
Technical Director, Studor Limited  
"Air for the Drainage System: Limiting Roof Penetrations in Tall Buildings"

**Sam McKechnie**, Building Solutions  
Designer Engineer, Studco Australia Pty Ltd  
"Improving Livability by Controlling Structural Noise Annoyance Inside Apartment Towers"

## 7F Case Studies: International Icons

Refer to Book of Abstracts page 151

The best way to understand the array of complexities inherent in supertall skyscrapers is through case study examples. This session embraces three unique towers from around the world, exploring reinforced concrete diagrids in New York's 53 West 53rd, structural considerations in Wuhan's CTF Finance Centre, and design adaptations in Moscow's Neva Towers complex.



**Chair:** Robert Halvorson  
Global Head of Structures/Executive Vice President, WSP

**Jeffrey Smilow**  
USA Director of Building Structures, WSP  
"53W53 | MoMA Tower – Reinforced Concrete Diagrid High-Rise: Where Art Meets Engineering"

**De Ming (Derry) Yu**, Project Director -  
Project Management, New World China Land  
"A Challenging Journey for the Third CTF Finance Centre"

**Alper Dilek**, Head of Architectural Design  
Department, Ronasans Holding  
"Delirious Moscow City – An Organic Adaptation of Neva Towers"

## 7G Smart Building Solutions

Refer to Book of Abstracts page 173

The possibilities presented by the inevitable collision of integrated technologies and architecture are vast and far-reaching. In this 20|20 Panel Discussion, a lively discussion will be generated on the future of tall buildings as it relates to the application of smart technologies, with representatives hailing from leading companies in this fast-moving field.

### 20|20 Panel Discussion



**Chair:**  
**Dan Brooks**, Director,  
Corporate Sales - Americas  
KONE



**Sascha Brozek**  
Senior Vice President,  
Major Projects, KONE



**Brett Casson**  
Global Digital Infrastructure  
Leader, Autodesk



**Peter Halliday**  
Global Head, Building  
Performance and  
Sustainability, Siemens  
Building Technology



**John MacLeod**  
IoT Specialist, IBM

## 7H International Case Studies

Refer to Book of Abstracts page 191

After considering all the facets of public realm design, this concluding session in the track will focus on several international case studies showcasing the highs and lows of urban public space. Merdeka PNB118 in Kuala Lumpur and 600 Collins Street in Melbourne will be profiled to study the successes of creating a mixed-use project in a dense core area, while a look at Chinese "Ghost Cities" will provide a warning against the excesses of economic development.



**Chair:** Cathy Hayes  
Principal, Ridley

**Tengku Dato' Ab Aziz Tengku Mahmud**  
Chief Executive Officer, PNB Merdeka Ventures  
Sdn. Bhd.  
"Urban Transformation in a Malaysian Context"

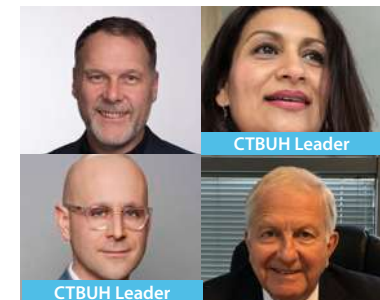
**Michele Pasca di Magliano**  
Associate Director, Zaha Hadid Architects  
"600 Collins Street, Melbourne: A Case Study for A New Paradigm of Mixed-Use Tower Design"

**Ian Smith**, Vice President, Special Projects,  
Asia Pacific, thyssenkrupp  
"The Ghost City Phenomenon"

## 7I The Well-Being Experience

Refer to Book of Abstracts page 211

The physical and psychological well-being of building occupants is perhaps the most important metric for determining a building's success. It is also one of the most difficult to measure quantifiably, with inputs ranging from air quality to availability of public space. Presentations here will consider the diverse factors that go into designing skyscrapers that provide high quality-of-life experiences.



**Chair:** Stephen Taylor  
City Executive – Sydney, Arcadis

**Swinal Samant**, Senior Lecturer,  
National University of Singapore  
"Exploring New Paradigms in High-Density Vertical Hybrids"

**Christopher Colasanti**  
Associate Partner, Jaros, Baum & Bolles  
"Air Quality and the Human Experience"

**Glan Blake Thomas**  
Director, AET Flexiblespace  
"Investigating Fresh Air Intake with Respect to WELL Building Standards in Tall Structures"

# Poster Exhibition

The poster exhibition is located as show in the plan (right) and features 16 posters connected with the conference theme, as well as finalists and semi finalists from the 2017 International Student Design Competition. Stop by any time during the conference to learn more about the topics and projects covered.



**Stuart Bull**

Digital Engineering Hub Leader, Laing O'Rourke

"Digital Transformation: Innovation in Delivery of Commercial Buildings"

Refer to Book of Abstracts page 216



**Mathew Burke**

Discipline Leader - Building Services (NSW), Meinhardt

"Diversity through Design: Neighbourhood and Network Services Arrangements in Skyscrapers of Commercial Buildings"

Refer to Book of Abstracts page 217



**Rodrigo Carazo**

President, Carazo Arquitectos S.A.

"Costa Rica: Transformation & Revival of a City through Densification & Tropical Urban Spaces"

Refer to Book of Abstracts page 218



**Michiel De Moel**

CEO, Elevating Studio Pte. Ltd.

"Improving your VT Infrastructure: Take Back Control of Your Elevators"

Refer to Book of Abstracts page 219



**Simon Dick**

Principal, Woods Bagot

"The Vertical Corporate Campus: Workplace Models for High-Rise Typology"

Refer to Book of Abstracts page 220



**Michael Ferreira**

Vice President, Jensen Hughes

"Improving High-Rise Situational Awareness: Dynamic Signage is an Answer"

Refer to Book of Abstracts page 221



**Nick Gillespie**

Structural Practice Leader - New Zealand, Mott MacDonald Group

"Urban Elegance: Integrated Solutions Creating Place and Residence"

Refer to Book of Abstracts page 222



**Aleksey Gorilovsky**

CEO, LiftEye Ltd.

"Elevators: Architectural Experience in Times of Fictional Environment"

Refer to Book of Abstracts page 223



**John Jory**

PhD Candidate, Queensland University of Technology

"The 'Eco-Strata' Tower: Utilising HRV (Height Relative Variables) in Tall Building Design"

Refer to Book of Abstracts page 224



**Jongmin Kim**

Facade Design Specialist, Dow Corning Corporation

"Crystal Clear Structural Glass Bonding: Connecting People & Surroundings"

Refer to Book of Abstracts page 225



**Christian Meinhardt**

Director TMD Systems, GERB Vibration Control Systems, Inc

"Application of a 240-Ton: Dual-Use Tuned Mass Damper System"

Refer to Book of Abstracts page 226



**Duncan Phillips**

Principal, RWDI

"State of the Art in Computational Modeling of the Urban Habitat"

Refer to Book of Abstracts page 227



**Brian Preston**

General Manager UK Office, Magnetek

"Reduce Elevator Energy Consumption: Modernise with Regenerative Drives"

Refer to Book of Abstracts page 228



**Derek Skolnik**

Project Manager, Kinematics Inc.

"Seismic-Smart City: Seismic Resiliency is the Future of Smart Cities"

Refer to Book of Abstracts page 229



**David Wood**

Technical Director, Beca Group

"A Duo in Downtown Singapore: The Structural Challenge of 'Sweeping Shapes'"

Refer to Book of Abstracts page 230



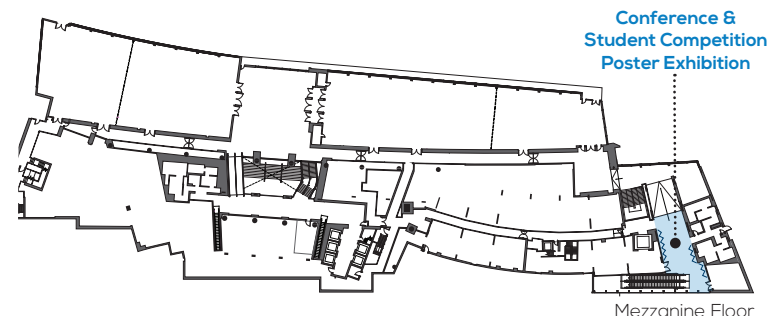
**Aleksandar Sasha Zeljc**

Principal, Gensler

"Past Buildings - Future Cities: Future Drivers of Urban Growth"

Refer to Book of Abstracts page 231

See page right to learn more about the CTBUH 2017 International Student Design Competition – student presentations and final judging!



Conference & Student Competition Poster Exhibition

Mezzanine Floor

## Student Competition Finalists:

**Bissoonauth Chitraj & Tan Jingxiang**  
Xi'an Jiaotong Liverpool University, China

**Daniel Ong**  
University of Westminster, UK

**Zihan Yang & Shenglan Chen**  
Anhui Jianzhu University, China

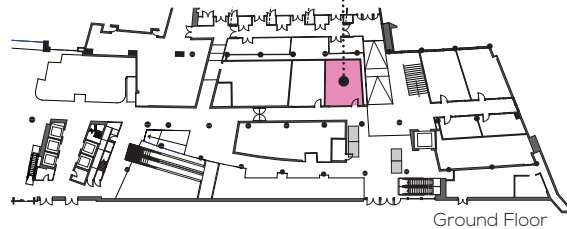
**Qiang Zhou & Minghao Liu**  
Inner Mongolia University of Technology, China

**Dagmar Zvonickova**  
University of Westminster, UK

# Academic & Research Awards to be Presented

## CTBUH 2017 International Student Design Competition

Join us in King 2 Room (Program Room "J" on venue plan), on Monday 30 October from 1:45 pm to 3:15 pm for Student Presentations & Final Judging!



The sixth annual International Student Design Competition culminates in this session, where the competition jury will convene to select the winner from the five student finalist teams (see page left), each of which have traveled from around the world to Sydney to present their design, with the kind support of Woods Bagot.

### Competition Jury:



**Domenic Alvaro**  
Director, Woods Bagot



**Ron Klemencic**  
Chairman & CEO,  
Magnusson Klemencic Associates



**James Parakh**  
Urban Design Manager,  
City of Toronto Planning Department



**Michele Pasca di Magliano**  
Associate Director,  
Zaha Hadid Architects



**Swinal Samant**  
Senior Lecturer  
National University of Singapore

CTBUH 2017 International Student Design Competition  
Kindly Sponsored By:

**WOODS BAGOT**

## CTBUH 2017 Research Seed Funding

The 2017 International Research Seed Funding award of US\$20,000, kindly sponsored by Sun Hung Kai Properties Ltd., has been won by Dr. Kate Swinburne, a Senior Fire Engineer at Olsson Fire & Risk, to understand the common factors that have led to recent fires in order to mitigate the risk of future fires. Swinburne will work in collaboration with the new CTBUH Fire Performance of Façades Working Group, to develop a database of high-rise fires that could be applied to the emerging field of machine-learning, which may lead to new and innovative fire solutions, and be used to identify areas of new work that should be advanced in conjunction with funding bodies and research partners.

### Award to be Conferred by:



**Sam Lai**, Project  
Director and General  
Manager - South  
China, Sun Hung Kai  
Properties Limited

CTBUH 2017 Research Seed Funding  
Program Funded by:



**新鴻基地產**  
Sun Hung Kai Properties

### Award to be Received by:



**Simon Lay** (On behalf of Dr. Kate Swinburne)  
Director, Olsson Fire & Risk

## CTBUH 2017 Student Research Funding

The 2017 Student Research Funding award of US\$20,000, kindly sponsored by Underwriters Laboratories, has been won by PhD student Andrea Giachetti, working under Professor Gianni Bartoli at the Università degli Studi di Firenze, Italy. The proposal, entitled "An innovative Tall Building Façade to Achieve High Ventilation, Fire Safety and Structural Performance," will examine safe building envelopes, where energy efficiency, acoustic insulation, and fire safety can be accomplished without sacrificing aesthetic qualities. Wind tunnel tests on scaled models will help determine a curtain wall topology that can reduce both wind loads and fire hazards.

### Award to be Conferred by:



**Alfredo Ramirez**  
Codes and Advisory Services  
Manager, Underwriters  
Laboratories

CTBUH 2017 Student Research  
Funding Program Funded by:



### Award to be Received by:



**Andrea Giachetti**  
PhD student, Università degli  
Studi di Firenze

## CTBUH 2017 Traveling Design Research Studio

This year's annual traveling Student Design Research Studio will be undertaken by 12 students from the Illinois Institute of Technology, with assistance from the CTBUH and US\$20,000 in funding from AECOM. The topic for this year's studio is "Sustainable Vertical Urbanism: Towards 2050", and is based on a future scenario where many existing cities have become indefensible, due to the ravages of climate change. Different climates and terrains will be explored globally, for the possible siting of new, hyper-dense megacities which maximize the sustainable opportunities of place and create an urban vernacular appropriate to the setting. All 12 students in the traveling studio are in attendance at the conference this week, thanks to AECOM.

### Award to be Conferred by:



**Kriston Symons**  
End Market Director  
- Buildings & Places,  
AECOM

CTBUH 2017 Travelling Design Research  
Studio Funded by:

**AECOM**

### Award to be Received by:

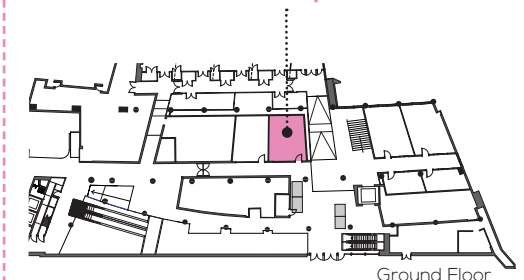


**Ian Achong**  
Student, Illinois  
Institute of Technology



**Arlene Hayes**  
Student, Illinois  
Institute of Technology

Join us in King 2 Room (Program Room "J" on venue plan) on Tuesday 31 October from 1:45 pm to 3:15 pm for the studio review presentations by IIT students, with AECOM senior representatives!





# Featured CTBUH Research Projects

The following presentations are all the result of CTBUH working groups or industry-funded research grants directed through the CTBUH Research Division. To discuss channeling your research project through the CTBUH Research Division, or to find out the benefits of doing so, connect with CTBUH Research Manager Dario Trabucco at the CTBUH Exhibition Booth in the Grand Ballroom Lobby, or contact him at [dtrabucco@ctbuh.org](mailto:dtrabucco@ctbuh.org).

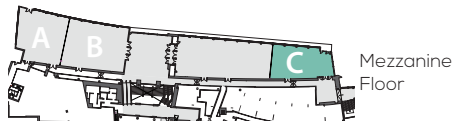


**Robert Foster**

Senior Lecturer, University of Queensland, Brisbane

## "Rethinking CTBUH's Height Criteria in the Context of Tall Timber"

Session 3C: Tall Timber  
Monday 30 October, 1:45–3:15 pm  
Maritime Ballroom



Recent developments in the design and construction of progressively taller buildings using engineered timber as a structural material raise important questions about the language that is used to describe tall buildings. This presentation discusses the role of the CTBUH Height Criteria in classifying tall buildings, and the challenges raised by the emergence of engineered timber as a contemporary structural material. The presentation proposes updating the existing terminology to accommodate the use of timber and other new materials in the design of tall buildings, and updates Conference attendees about the outcome of the discussion at the Pre-Conference Workshop on Tall Timber, with a view toward revising the CTBUH Criteria to include timber.

Project enabled through the kind volunteer work of the CTBUH Tall Timber Working Group.

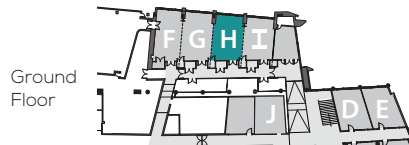


**Dario Trabucco**

CTBUH Research Manager, Venice

## "Century-Old Urban Visions Come True: Rope-Less Elevators for the City of Tomorrow"

Session 3H: Public Realm: Interior Systems  
Monday 30 October, 1:45–3:15 pm  
Wharf 3



Multi-layered streets, bridges spanning between buildings across active roads, flying vehicles, cities fully integrated in three dimensions... Over a century ago, architects imagined cities would evolve this way. Now, thanks to recent developments in the elevator industry, an intensely connected 3-D city can be realized, releasing the visionary designs of today's architects from the "evolutionary bottleneck" created by the constraints of incorporating conventional elevators in tall building and urban design. This presentation showcases a CTBUH research study, sponsored by thyssenkrupp, that investigates the possibilities that will be enabled for architects and urban planners by the introduction of rope-less, non-vertical elevator technologies.

Project enabled through research funding provided by:

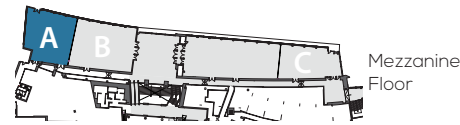


**Peng Du**

CTBUH China Office Director & Academic Coordinator, Chicago

## Downtown High-Rise vs. Suburban Low-Rise Living: A Pilot Study on Urban Sustainability"

Session 6A: Urban vs. Suburban  
Tuesday 31 October, 11:15 am–12:45 pm  
Grand Ballroom I



The presentation covers a research project and publication that investigates and compares the sustainability of high-rise downtown and low-rise suburban people's lifestyles from multiple perspectives, using Chicago-based case studies. It provides details on home operational energy use, the embodied energy of the dwelling, home water consumption, mobility and transport movements (including both private and public transport), infrastructure networks, public open space, and quality of life.

Book Launch, Monday 30 October, 3:15 – 3:45 pm, Grand Ballroom Foyer



Project enabled with the partnership of:

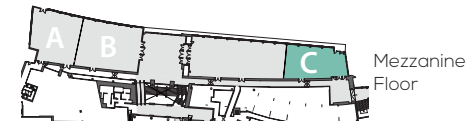


**John Viise**

Vice President  
Thornton Tomasetti, Chicago

## "An Overview of CTBUH's New Performance-Based Seismic Design for Tall Buildings Publication"

Session 6C: Engineering for Threats  
Tuesday 31 October, 11:15 am–12:45 pm  
Maritime Ballroom



The CTBUH Performance-Based Seismic Design (PBSD) Working Group was formed to provide structural engineers, developers, and contractors with a general understanding of the PBSD process through a new Technical Guide, now available for purchase at the CTBUH Exhibition Booth in the Grand Ballroom Lobby. The timing of the output is very timely, as many urban centers around the world are exploring the PBSD approach over code-prescriptive alternatives, particularly in seismically active regions.

Book Launch, Monday 30 October, 3:15 – 3:45 pm, Grand Ballroom Foyer



Project enabled through the kind volunteer work of the CTBUH Performance-Based Seismic Design Working Group.

# Core Conference Closing Session, Sydney!



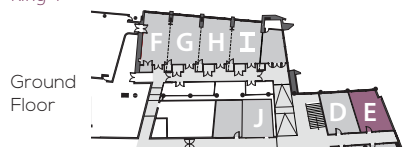
**Jennifer Schneider**

*Structural & Security Glazing  
Segment Manager, Trosifol*

## "Cyclone-Resistant Curtain Walls for the Resiliency of Buildings & Cities"

### Session 6E: Façades

Tuesday 31 October, 11:15 am–12:45 pm  
King 4



Extreme storm events represent a serious threat to the survival of buildings and developing cities. As a result, façade manufacturers have developed cyclone-resistant curtain walls to prevent damage caused by wind-borne debris. This is an effective solution to increase the resiliency of buildings and cities in particularly prone areas. There has been an increase in the demand for building resiliency in developing cities in the coastal areas of the Asia-Pacific region, which are experiencing increased frequency and severity of cyclones. A CTBUH Research Project, sponsored by Trosifol and presented here, is examining Asia-Pacific regional codes, so as to provide an effective and economic solution to increase resiliency.

Project enabled through research funding provided by:



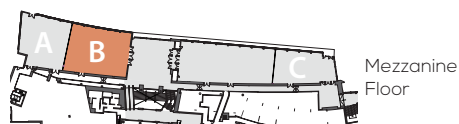
**Alfredo Ramirez**

*Codes and Advisory Services  
Manager, Underwriters  
Laboratories, Northbrook*

## "Grasping Green Requirements & Gaps in Application"

### Session 7B: Greening the Vertical Realm

Tuesday 31 October, 1:45–3:15 pm  
Grand Ballroom II



The rising application of greenery in architecture suggests a need for expanding and updating existing standards. The increasing diffusion of "green living spaces" in buildings must also be considered. Ongoing CTBUH research is identifying existing global green codes and examining the extent of coverage for each document. The Council's research, presented here, also identifies specific guidance that applies to the installation, fire separation, and maintenance of green features incorporated in building structures. Through this analysis, next steps are identified that will encourage the application of green systems in tall buildings to an extent far beyond the allowances and considerations of existing international codes.

Project enabled through research funding provided by:



**Goman Ho**

*Director, Arup, Hong Kong*

## "Outrigger Systems for Tall Buildings"

### Melbourne: Technical Session 4B

Friday 3 November, 11:00 am–12:30 pm  
Melbourne School of Design

Among structural systems for tall buildings, outriggers are one of the most common, especially for those buildings with a relatively regular floor plan. This presentation is a state-of-the-art review of outrigger systems in tall buildings – as illustrated in the newly updated CTBUH Outrigger Systems Technical Guide – including development and application history, and presenting the concepts of optimum topology, damped outrigger systems, and design and construction considerations.

Book Launch, Monday 30  
October, 3:15 – 3:45 pm,  
Grand Ballroom Foyer



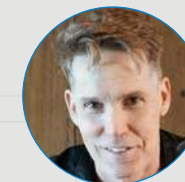
Project enabled through the kind volunteer work of the CTBUH Outriggers Working Group.

**When: 5:10 – 5:20 PM, Tuesday 31 October 2017**

**Where: Grand Ballroom**

Join the three Conference Co-Chairs immediately following Plenary 3 for some brief concluding remarks on the two-day Sydney portion of the conference. There, we will reflect on the key findings and takeaways from the event, summarizing how the industry as a whole can realize better-connected, more livable cities. Stay for the CTBUH 2018 Middle East Conference Launch, to follow.

## 2017 Conference Co-Chairs:



**Ken McBryde**

*Director,  
Sydney Architecture Studio*



**Jeff Morgan**

*Associate Principal,  
Grimshaw Architects*



**Philip Vivian**

*Director,  
Bates Smart*

# Networking Receptions

## VIP Opening Reception at 33 Alfred Street, Sydney

Sunday, 29 October, 6:00–8:00 p.m.



This special reception held on the eve of the Conference will give VIPs a unique opportunity to mingle in the fantastic setting of 33 Alfred Street. The elegantly curving building, considered to be Sydney's first skyscraper, will host the event on its rooftop deck, offering a commanding view of the Sydney Opera House, Harbour, and Bridge.

Hosted by:



Sponsored by:



### Getting to the Venue

**Address:** 33 Alfred Street, Levels 25 & 26

**Coach Departure:** 5:30pm from the Heritage Atrium on the Lower Ground level of the conference venue; Hyatt Regency. See Venue Plan on page 5 for how to access the Lower Ground level.

**Note:** If you will not be traveling with the CTBUH provided coaches, upon reaching 33 Alfred St., check in at the main lobby where you will be greeted and directed to the correct elevator.

**Walk:** Will take about 20 minutes from the conference venue; Hyatt Regency

**Taxi:** Will take about 30 minutes from the conference venue; Hyatt Regency (due to traffic)

**Nearest Train Station:** Circular Quay

**Return Trip:** Coaches will depart from the reception venue starting at 8:00pm to take delegates back to the conference venue; Hyatt Regency

## Day 1 Networking Reception at Barangaroo South, Tower 1, Sydney

Monday, 30 October, 6:00–8:00 p.m.



In the midst of what will be an engaging discourse on connected, dense, and prosperous cities, the International Towers will be the site of the Day 1 Networking Reception, hosted by Lendlease and kindly sponsored by Schindler. As the sun sets, guests will enjoy stunning western views of Sydney and the Barangaroo precinct.

Hosted by:



Sponsored by:

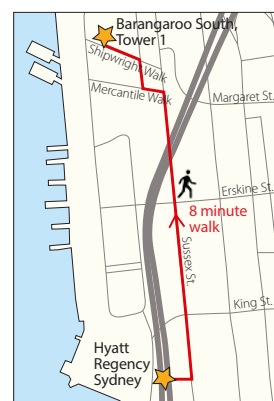


### Getting to the Venue

**Address:** Exchange Place, 100 Barangaroo Avenue, Tower One, Level 32

**Walk:** Will take about 8 minutes from conference venue; Hyatt Regency

**Arrival:** Upon reaching Tower One, enter through the south lobby where you will be greeted and directed to the correct elevator.



## Day 2 Garden Party at The Calyx, Sydney

Tuesday, 31 October, 6:00–9:00 p.m.



The Calyx is a new, must-see, world-class attraction in The Royal Botanic Garden of Sydney, fusing art, theater, and flora. An integrated mix of indoor and outdoor areas, boasting stunning architecture and themed exhibitions, The Calyx is truly a "living" art gallery, making it an engaging location for the end of the core Sydney conference.

Hosted by:



Sponsored by:



### Getting to the Venue

**Address:** The Calyx, Royal Botanic Gardens, Mrs Macquaries Road

**Coach Departure:** 5:30pm from the Heritage Atrium on the Lower Ground level of the conference venue; Hyatt Regency. See Venue Plan on page 5 for how to access the Lower Ground level.

**Note:** If you will not be traveling with the CTBUH provided coaches, upon reaching the Royal Botanic Gardens park, enter through gates at Macquarie Street and follow the walking path to The Calyx.

**Walk:** Will take about 25 minutes from conference venue; Hyatt Regency

**Taxi:** Will take about 30 minutes from conference venue; Hyatt Regency (due to traffic)

**Nearest Train Station:** Circular Quay or Martin Place (both are 12-minute walks to The Calyx)

**Return Trip:** Coaches will depart from the reception venue starting at 9:00pm to take delegates back to the conference venue; Hyatt Regency



## Day 4 Networking Reception at Melbourne Cricket Ground, Melbourne

Thursday, 2 November, 6:30–8:30 p.m.



The first day of the Melbourne program will conclude with a networking reception at the Melbourne Cricket Ground (MCG), a superb sporting arena at the heart of Melbourne. The reception will take place in the Harrison Room and Dean Jones Bar – a modern and versatile space featuring sweeping views across the arena.

In Partnership with:



There is still room to join the Melbourne Program! See **page 34** for further details on the program, and visit the Registration Help Desk onsite at the core Sydney Conference to add the Melbourne program and Networking Reception to your package.

## Day 4 Networking Reception at 480 Queen Street Roof Terrace Garden, Brisbane

Thursday, 2 November, 6:00–8:00 p.m.



The reception concluding the first day of the Brisbane program will be held on the 480 Queen Street Roof Terrace Garden, a spectacular entertainment area that boasts views to the river, Story Bridge, and St John's Cathedral. 480 Queen Street focuses on sustainability and offers exceptional amenities, including a nature-based, in-building parkland.

Sponsored by:



There is still room to join the Brisbane Program! See **page 35** for further details on the program, and visit the Registration Help Desk onsite at the core Sydney Conference to add the Brisbane program and Networking Reception to your package.



Delegates enjoy the fantastic ambiance of the Networking Reception at (from the top) Kathleen's 5, Shanghai (CTBUH 2014); One World Trade Center, New York (CTBUH 2015); and Ping An Finance Center, Shenzhen (CTBUH 2016).



# Day 3 Sydney: Off-Site Programs

Wednesday 1 November

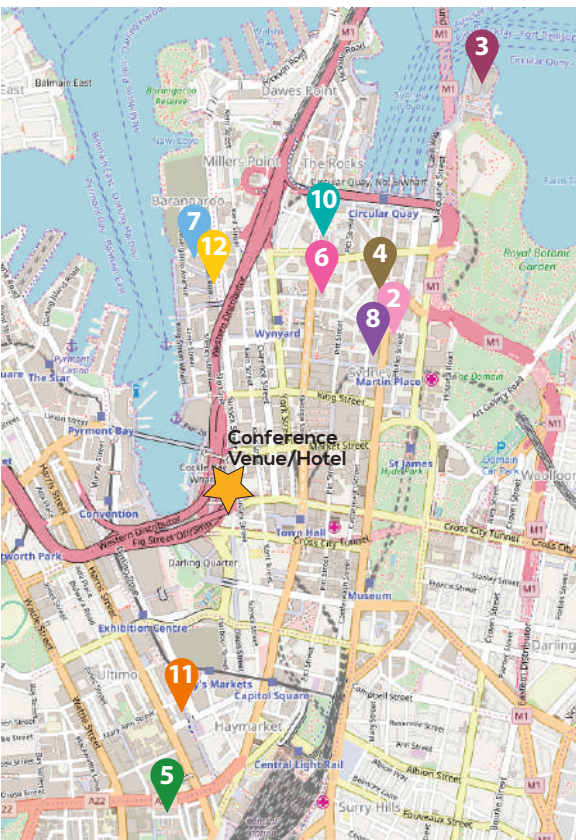
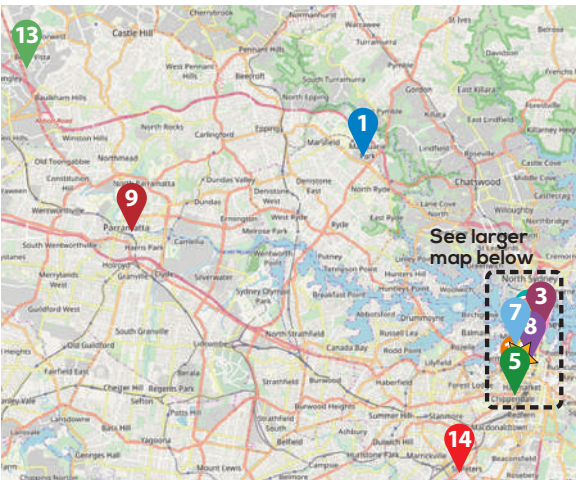
AM  
Morning Program  
Time varies per program

PM  
Afternoon Program  
Time varies per program

There is still room to join some Off-Site Programs!

Visit the Registration Help Desk on-site at the core Sydney conference to add off-site programs to your package.


## Map of Off-Site Programs



### 1 City-Shaping Infrastructure Delivered at High Speed

AM 7:30 am - coach departure  
8:15 am - 12:30 pm  
PM 1:30 pm - coach departure  
2:15 pm - 6:30 pm

#### Hosted at Sydney Metro



When it comes to large-scale transit projects, balancing multiple construction sites and delivering results at a high speed is a significant burden that is not easy to overcome. Sydney Metro North West offers a compelling example of these challenges, with major construction ongoing at 16 sites along the project, including eight planned or under-construction stations. Presentations examine the specifics of the project before a tour of multiple stations.

Hosted by:  
**Transport for NSW**

#### Getting to the Venue

**Address:** Sydney Metro Office, Ground Floor, South Building, 22 Giffnock Ave, Macquarie Park

**Coach Departure:** From the Heritage Atrium on the Lower Ground level of the conference venue; Hyatt Regency. Meet at 7:15am (morning tour) or 1:15pm (afternoon tour). See Venue Plan on page 5 for how to access the Lower Ground level.

**Nearest Train Station:** Macquarie Park – About 45 minutes from Wynyard Station (T1) plus 10 minute walk

#### IMPORTANT NOTES:

The start times for this program are earlier than typical to allow for transit to the presentation venue. If you will not be using the provided coach from the Hyatt Regency, please ensure your arrival at the Sydney Metro Office by 8:15am/2:15pm for the start of the session.

### 2 Communal & Public Spaces in High-Rise Buildings

AM 8:30 am - 12:00 pm  
PM 2:00 pm - 5:30 pm

#### Hosted at 8 Chifley



High-rises benefit from the introduction of communal spaces at height by bringing the vitality of the public realm directly into the building. But how to design effective public spaces without compromising the security and efficiency of the building itself? Speakers discuss balancing these needs, with 8 Chifley and its adaptable two- and three-story vertical "villages," providing context for discussing the challenges and benefits of communal space.

Hosted by:  
**CORRS CHAMBERS WESTGARTH**

#### Getting to the Venue

**Address:** 8 Chifley, 8-12 Chifley Square

**Meeting Point:** Corrs Chambers Westgarth office, Level 17

**Nearest Train Station:** Martin Place Station

**Taxi:** Will take about 15 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 15 minutes from the conference venue; Hyatt Regency

### 3 Contemporary Back of House in World Heritage Buildings

AM 8:30 am - 12:00 pm

PM 2:00 pm - 5:30 pm

#### Hosted at Sydney Opera House



Architects must strike a delicate balance when designing contemporary service space for world heritage buildings. Balancing the need to provide effective functional operation with heritage preservation and visitor access is an ongoing concern. The Vehicle and Pedestrian Safety (VAPS) project currently underway at the Sydney Opera House showcases this challenge. Tour participants learn about steps taken to separate heavy vehicular from pedestrian and tourist traffic.

Organized by:

ARUP

#### Getting to the Venue

**Address:** Sydney Opera House, Bennelong Point

**Meeting Point:** AM: Stage door, PM: Utzon Room – enter at concourse level under stairs for both.

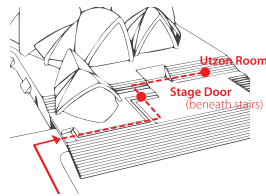
**Nearest Train Station:** Circular Quay

**Taxi:** Will take about 20 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 30 minutes from the conference venue; Hyatt Regency

#### IMPORTANT NOTES:

Parts of the building tour will include construction areas. Flat-soled, close-toe shoes are required to join these parts of the program.



### 4 Double Skin-Façades: The Cutting Edge

AM 8:30 am - 12:00 pm

#### Hosted at 1 Bligh Street



Advances in energy efficiency have revolutionized how buildings are designed, particularly with respect to façades, highlighted by the rise of double-skin enclosures. This cutting-edge design concept can be applied in a variety of ways, resulting in an explosion of novel building forms and new functional opportunities, from the multistory atria to natural ventilation. 1 Bligh Street, the venue for this program, features its own innovative double-skin façade with inlaid automated solar blinds.

Organized by:

architectus™

#### Getting to the Venue

**Address:** 1 Bligh Street

**Meeting Point:** 26th Floor Executive Center

**Nearest Train Station:** Circular Quay

**Taxi:** Will take about 15 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 15 minutes from the conference venue; Hyatt Regency

### 5 Greening the City

AM 8:30 am - 12:00 pm

PM 2:00 pm - 5:30 pm

#### Hosted at One Central Park



As green walls proliferate, significant challenges remain in ensuring their contribution to a building's overall sustainability. This session focuses on green walls' positive benefits. With a green wall that reduces energy consumption and traps CO<sub>2</sub>, One Central Park is an excellent setting for this conversation. Following presentations identifying the positive benefits of green walls and best implementation practices, attendees have the opportunity to tour the building, viewing the green walls up-close.

Hosted by:



#### Getting to the Venue

**Address:** 28 Broadway, Chippendale

**Meeting Point:** Body Corporate Meeting Room, Level 4. Enter through the retail mall at 28 Broadway and take the lift to Level 4

**Nearest Train Station:** Central

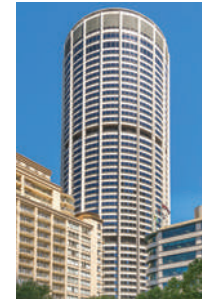
**Taxi:** Will take about 15 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 25 minutes from the conference venue; Hyatt Regency

### 6 Harry Seidler Walking Tour

PM 2:00 pm - 5:30 pm

#### Hosted at Australia Square



Harry Seidler and Associates pioneered the use of large open plazas and prominent artwork in Australia's office towers. This session explores the importance of Seidler's work, examining the structural and spatial innovations that transformed Sydney's central business district, how new office towers can address challenges and build off the success of these landmark structures. This session also embraces a walking tour stopping at Seidler's Australia Square, MLC Centre, 9 Castlereagh, and Cove Apartments.

Hosted by:

JPW  
JOHNSON PILTON WALKER

Organized by:

Harry Seidler & Associates

#### Getting to the Venue

**Address:** 95 Pitt Street, Plaza Building, Australia Square

**Meeting Point:** Johnson Pilton Walker office, Level 10

**Nearest Train Station:** Wynyard

**Taxi:** Will take about 15 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 10 minutes from the conference venue; Hyatt Regency

*Continued on next page...*



## 7 High-Efficiency Office Complexes

AM 8:30 am - 12:00 pm

PM 2:00 pm - 5:30 pm

### Hosted at International Towers



The International Towers, a stunning trio of tall office buildings in Barangaroo South along the Sydney waterfront, house approximately 23,000 workers across 30,000 square meters of space, with energy-saving façade elements and a strong relationship to the ground plane. Presentations here investigate the underpinnings of a successful, energy-efficient office complex, using the International Towers as a backdrop and case study.

Hosted and Organized by:



### Getting to the Venue

**Address:** Exchange Place, 300 Barangaroo Avenue

**Meeting Point:** Tower Three, Level 13. First meet in the south lobby of building.

**Nearest Train Station:** Wynyard

**Taxi:** Will take about 10 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 8 minutes from the conference venue; Hyatt Regency

## 8 Martin Place Renewal: Commercial Development In a Historic Civic Space

AM 8:30 am - 12:00 pm

### Hosted at 50 Martin Place



Martin Place is Sydney's primary public square and business center. Over the last decade, the area has undergone an extensive renewal, involving the regeneration of a number of the city's most iconic heritage-listed buildings. These have been developed to offer sensitivity to the rich heritage setting and a tangible contribution to the public domain. This program presents the perspectives of the architects, builders and developers responsible for realizing several projects in Sydney's most important civic space.

Organized by:

HASSELL

### Getting to the Venue

**Address:** 50 Martin Place

**Meeting Point:** Use Elizabeth Street entrance, check in at reception desk to gain access to Level 11 boardroom.

**Nearest Train Station:** Martin Place

**Taxi:** Will take about 15 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 12 minutes from the conference venue; Hyatt Regency

## 9 Polycentric Urban Clusters

AM 8:45 am - 1:00 pm

### Hosted at Parramatta Square



Today, many cities are embracing a polycentric urban model, with regions organized around political, social, or commercial clusters. Parramatta in the 21st century has emerged as a viable urban cluster on its own, in part facilitated by the expansion of the Parramatta railway station, as well as a consolidation of government offices in the area.

This session examines the concept of polycentric urban clusters, using Parramatta as an example, followed by an urban tour.

Hosted by:

City of Parramatta

### Getting to the Venue

**Address:** 126 Church Street, Parramatta

**Meeting Point:** City of Parramatta office, meet in the ground floor foyer. Access to the Level 11 boardroom will be arranged.

**Nearest Train Station:** Parramatta.

Recommended to take express service (about 30 minutes from Wynyard or Townhall stations), add 10 minutes to travel time with regular service.

**Taxi:** Driving not recommended – Traffic can take over an hour

### IMPORTANT NOTES:

Please provide 40 minutes for personal travel time to arrive at Parramatta Town Hall by train, as driving is not recommended. The walking tour will conclude at the Ferry Wharf and a ferry ticket will be provided for the return trip, arriving at Circular Quay at 1:04pm. It is recommended to purchase lunch at the wharf to eat on the return trip.

## 10 The Changing High-Rise Workplace

AM 8:30 am - 12:00 pm

PM 2:00 pm - 5:30 pm

### Hosted at EY Centre



Gone are the days of rows of cubicles; instead, offices must provide attractive workspaces that provide for the well-being of employees, an increasingly important metric, all while realizing high sustainability standards. New office buildings offer a multitude of amenities, but what do employees look for in an office space? And how can a great workplace positively contribute to the needs of a given organization? The recently completed EY Centre provides an excellent backdrop to discuss the changing high-rise workplace.

Hosted by:



### Getting to the Venue

**Address:** 200 George Street

**Meeting Point:** Mirvac Office, Level 28. Check in with concierge in the lobby before proceeding to Level 28

**Nearest Train Station:** Circular Quay

**Taxi:** Will take about 15 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 15 minutes from the conference venue; Hyatt Regency

## 11 The Power of the Icon

AM 8:30 am - 12:00 pm

PM 2:00 pm - 5:30 pm

### Hosted at Dr. Chau Chak Wing Building



Tour the iconic Dr. Chau Chak Wing building, the only Frank Gehry building in Australia. The event includes a 1-hour presentation and discussion by leading architects, engineers and academics involved with the project regarding the power of the icon and what the building means for the university and the region. The program also reviews the

building's impact on the adjacent urban environment, which includes Sydney's version of New York's High Line, known as the Goods Line.

Organized by:



### Getting to the Venue

**Address:** Building 8, 14-28 Ultimo Rd, Ultimo

**Meeting Point:** Room 802

**Nearest Train Station:** Central

**Taxi:** Will take about 15 minutes from the conference venue; Hyatt Regency (due to traffic)

**Walk:** Will take about 18 minutes from the conference venue; Hyatt Regency

## 12 Timber in Commercial Architecture

AM 8:30 am - 12:00 pm

PM 2:00 pm - 5:30 pm

### Hosted at International House



The International House is considered the first engineered-timber office building in Australia. The project – which emphasizes wide floorplates, views to the inside and out through floor-to-ceiling glass, and small ecological footprint versus other materials – is representative of the enthusiasm for innovative tall timber buildings in Australia.

The program and tour underscore that Australia is both a center of innovation in new building technologies and an attractive place for innovative companies to locate.

Hosted and Organized by:



### Getting to the Venue

**Address:** Exchange Place, 300 Barangaroo Avenue

**Meeting Point:** Tower Three, Level 13. First meet in the south lobby of building.

**Nearest Train Station:** Wynyard

**Taxi:** Takes about 10 minutes from conference venue; Hyatt Regency (due to traffic)

**Walk:** Takes about 8 minutes from conference venue; Hyatt Regency

### IMPORTANT NOTES:

Presentations for this tour will take place in Lendlease's office in the neighboring International Tower Three building. Attendees will then walk to visit the International House building following presentations.

## 13 Timber in Medium Density Residential Developments

PM 1:30 pm - coach departure  
2:00 pm - 6:00 pm

### Hosted at Aveo Norwest



The varying requirements of residential design offer different challenges to structural timber than commercial architecture, showcasing the versatility of the material. With residences and communal facilities such as restaurants, a library, and a multi-function center, the under-construction Aveo Norwest provides an excellent case study of mass timber in

medium-density residential developments. As a program venue, it provides the backdrop for a discussion on the challenges and benefits of structural timber.

Organized by:

JACKSON TEECE

### Getting to the Venue

**Address:** Norbrik Dr, Bella Vista NSW 2153

**Coach Departure:** From the Heritage Atrium on the Lower Ground level of the conference venue; Hyatt Regency. Meet at 1:15pm. See Venue Plan on page 5 for how to access the Lower Ground level.

**Nearest Train Station:** Not accessible by train. The "B 607X" Bus provides a direct trip (about 50 minutes from conference venue; Hyatt Regency)

### IMPORTANT NOTES:

Parts of the building tour will include construction areas. Flat-soled, close-toe shoes are required to join these parts of the program.

The start time for this program is earlier than typical to allow for transit to the presentation venue. If you will not be using the provided coach from the Hyatt Regency, please ensure you arrive at the Aveo site by 2:00pm for the start of the session.

## 14 Wind Engineering & Wind Tunnel Testing

AM 8:00 am - coach departure  
8:30 am - 12:30 pm

PM 1:30 pm - coach departure  
2:00 pm - 5:30 pm

### Hosted at CPP Wind Tunnel



Wind testing plays a critical role in the creation of successful, pleasant urban environments. This session conveys how wind engineering is applied during the design process. The benefits of these analyses are explored from the perspective of the tall building developer, who benefits from reducing the severity of downdrafts and buffeting around tall

buildings, particularly in public open areas. Following the presentations, participants visit the wind tunnel to get a behind-the-scenes look at wind tests in action.

Hosted and Organized by:



### Getting to the Venue

**Address:** CPP Office, 2/500 Princes Hwy, Sydney NSW 2044

**Coach Departure:** From the Heritage Atrium on the Lower Ground level of the conference venue; Hyatt Regency. Meet at 7:45 am (morning tour) or 1:15pm (afternoon tour). See Venue Plan on page 5 for how to access the Lower Ground level.

**Nearest Train Station:** Sydenham

### IMPORTANT NOTES:

The start times for this program are earlier than typical to allow for transit to the presentation venue. If you will not be using the provided coach from the Hyatt Regency, please ensure you arrive at the CPP Office by 8:30am/2:00pm for the start of the session.

# Pre-Conference Workshops

Sunday, 29 October 2017, Morning

## Fire Performance of Façades

**Venue:** The University of Sydney, School of Civil Engineering, Shepherd St, Darlington

### Hosted by:

The University of Sydney, School of Civil Engineering, Shepherd St, Darlington, with support from the Innovative Fire Engineering group at the University of Melbourne



Following a significant number of tall building fires around the world attributed to cladding, including the tragic Grenfell Tower fire in the UK, the CTBUH has established a multinational, multi-disciplinary Working Group to examine the fire performance of façades. This workshop identifies research that could help mitigate future risks.

### Workshop Leader:



David Scott  
Structural Director, Laing O'Rourke

## Floor-Area Calculation

**Venue:** Rider Levett Bucknall Office, Level 19, 141 Walker Street, North Sydney

### Hosted by:



Techniques for accurately measuring floor area within tall buildings vary considerably between regions. This workshop will chart a path toward achieving interdisciplinary consensus in this topic, and will serve as a launching point for a dedicated CTBUH research project on the topic, kindly sponsored by ArcelorMittal.

### Workshop Leader:



Dario Trabucco  
CTBUH Research Manager

## Modular High-Rise Construction

**Venue:** Hyatt Regency, Heritage Room I, 161 Sussex Street, Sydney

### Hosted by:



Modular construction offers tremendous advantages in productivity, safety, efficiency and waste minimization over conventional means. Interest in applying the method to high-rise construction is increasing. This workshop is to establish salient high-rise modular issues, challenges and trends, and to publish a CTBUH Technical Guide on the subject.

### Workshop Leader:

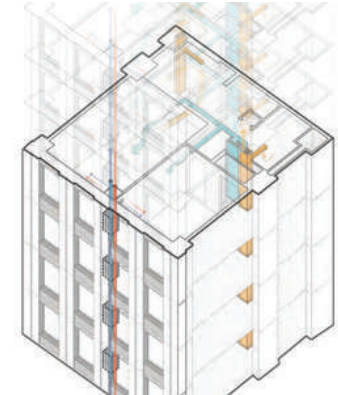


James Murray-Parkes  
Science & Engineering Director, Multiplex

## PassivHaus For High-Rise

**Venue:** The University of New South Wales, AGSU, Level 2, Red Centre West Wing, Sydney

### Hosted by:



The Passivhaus standard rigorously stipulates whole-building energy performance that exceeds most other standards and requires planning from the outset of design. This workshop is to establish techniques for achieving Passivhaus high-rise buildings economically, with the goal of forming an international committee and publishing CTBUH guidance.

### Workshop Leader:



Dr. Philip Oldfield  
Senior Lecturer, University of New South Wales



## Seismic Design

**Venue:** Beca Office, Level 11,  
44 Market Street, Sydney

Hosted by:



As buildings grow taller and feature more complex designs, traditional prescriptive building codes cannot keep up. Also, codes vary tremendously across borders, and no international best-practice standard exists. This workshop covers the process of performance-based seismic design (PBSD), and will review the new CTBUH Technical Guide on PBSD.

### Workshop Leaders:



**Ron Klemencic**  
Chairman & CEO,  
Magnusson Klemencic  
Associates



**John Viise**  
Vice President, Thornton  
Tomasetti

## Tall Timber

**Venue:** Arup Office, Level 10,  
201 Kent Street, Sydney

Hosted by:



Recently, there has been increased interest in using timber as a major structural element in skyscrapers. There are now numerous, difficult-to-validate claims to the title of "tallest timber building." This workshop evaluates proposed changes to the CTBUH Height Criteria and sets a path for the creation of a CTBUH Technical Guide on tall timber.

### Workshop Leaders:



**Carsten Hein**  
Associate Director  
structural engineering,  
Arup



**Rob Foster**  
Senior Lecturer, University  
of Queensland

## Urban Habitat / Urban Design

**Venue:** Ethos Urban Office,  
173 Sussex Street, Sydney

Hosted by:



The Council's emphasis on the urban habitat has resulted in a number of initiatives led by the CTBUH Urban Habitat / Urban Design Committee, including a new Technical Guide entitled, *The Space Between: Urban Places, Public Spaces & Tall Buildings*. This workshop discusses the progress of, and sets the agenda for, the committee moving forward.

### Workshop Leader:



**James Parakh**  
Urban Design Manager, City of  
Toronto Planning Department

## Wellness: Future of Workplace and the Human Experience

**Venue:** Barangaroo South – Tower 1,  
200 Barangaroo Avenue, Sydney

Hosted by:



The way we work is changing. We spend a third of our lives at work and live in a world in which lifestyle disease is increasing. As we are living and working longer, health and well-being is more important than ever. Join an insightful health and mindfulness session perfect for those recovering from a long flight.

### Workshop Leader:



**Duncan Young**, Head  
of Workplace Health &  
Wellbeing, Lendlease

# Day 4 & 5 Melbourne: Program Overview

Thursday 2 November & Friday 3 November



The Melbourne program will be hosted at the Melbourne School of Design within the University of Melbourne:

**University of Melbourne, Masson Rd, Parkville VIC 3010, Australia**

**Note:** A more detailed program will be distributed in Melbourne at the event itself.

## Thursday 2 November

### Session 1: Melbourne - World's Most Livable City

Representatives of State, Local and Regional Planning Authorities, as well as Think Tanks on Planning and Infrastructure, will share their visions for Melbourne and the challenge of maintaining the title of "world's most liveable city" given the pressures of population growth, resistance to densification, ageing infrastructure and infrastructure delivery to underserved populations.



**Larry Parsons**  
Design Director,  
Ethos Urban  
"Melbourne's High-Rise Future"



**Jonathan Spear**  
Executive Director,  
Infrastructure Victoria  
"Victoria's 30-Year  
Infrastructure Strategy"



**Roger Teale**  
Business Development Manager,  
Lendlease Corporation  
"Melbourne Metro"

### Session 2: Walking Tours

Following on from the success of the popular CTBUH Walking Tours, held in Melbourne and other international cities over the last two years, delegates will have the opportunity to explore Melbourne's culture, heritage and development precincts through one of the tours offered below:

- A** Melbourne Laneways
- B** Docklands
- C** Queen Victoria Market
- D** Southbank
- E** Sports and Entertainment Precinct
- F** Arts Precinct
- G** Collins St. Rejuvenation



### Networking Reception

Day 1 of the Melbourne Program will conclude with a networking reception at the Melbourne Cricket Grounds. See page 27 for more details.



## Friday 3 November

### Session 3:

#### 3A: Planning for Rapid Growth in a Multi-Modal City

Neil Stonell, *Partner, Grimshaw Architects*

Gianluca Racana, *Director, Zaha Hadid Architects*

Toby Lodge, *Principal, HASSELL*

#### 3B: Utilizing Challenging Sites in Compact Urban Cities

George Argyrou, *Director, Hickory Group*

Richard Salter, *Structures Leader, Arup*

Matt Stapleton, *Associate Director, WSP*

### Session 4:

#### 4A: Designing for Mixed-Use and Multiple Users

Kristen Whittle, *Director, Bates Smart*

Kate Frear, *Principal, Woods Bagot*

Philip Rowe, *Director, Cox Architecture*

#### 4B: New Challenges & Opportunities for Structural Engineers

Goman Wai-Ming Ho, *CTBUH Leader / Director, Arup*

Barry Roben, *Director, Irwinconsult Pty*

Rob DiBlasi, *Director, 4D Workshop*

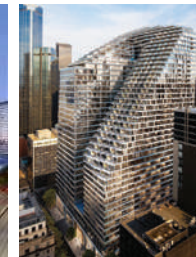
### Sessions 5 & 6 Off-site Programs:



1 Spring Street



664 Collins Street



Collins Arch



Melbourne Quarter



Orica House



Aurora



EQ Tower



Mayfair



Medibank



Rialto



# Day 4 & 5 Brisbane: Program Overview

Thursday 2 November & Friday 3 November



The Brisbane program will be hosted at 480 Queen Street on Day 1 and the Customs House on Day 2.

**Note:** A more detailed program will be distributed in Brisbane at the event itself.

## Thursday 2 November

### Opening Address: Brisbane Development Overview

The Brisbane program will open with a presentation on Brisbane as a river city - covering the history of Brisbane's river front development, revitalization and the South bank.



**Malcolm Middleton**  
Government Architect, Queensland Government  
"Overview of Brisbane Development"

### Session 1: Structurally Influenced Design Solutions

480 Queen: BVN

111 Eagle: Arup/Cox

Brisbane Sky Tower: Hutchinson Builders

### Session 2: Building Site Visits



480 Queen Street



111 Eagle Street



Brisbane Skytower

### Networking Reception

Day 1 of the Brisbane Program will conclude with a networking reception at the 480 Queen Street Roof Terrace Garden. See page 27 for more details.



## There is still room to join the Brisbane Program!

Visit the Registration Help Desk on-site at the Sydney core conference to add the Brisbane program and Networking Reception to your package.

## Friday 3 November

### Session 3: Innovative Facades

Abian Sunland Development: Abian Sunland

Buildings that Breathe: David Cowan

443 Queen Street: Architectus

### Session 4: Brisbane's Next City Changing Projects

1 William Street: Woods Bagot/Arcadis

Vision Southbank: Conrad Gargett

Destination Brisbane: Destination Brisbane

### Session 5: Building Site Visits



1 William Street



Abian Apartments



Destination Brisbane

### Session 6: 25 King Street



Leandlease will host the closing session at their Brisbane headquarters office overlooking the construction site of 25 King Street. The tower is being built using a revolutionary building timber technology, utilizing cross laminated timber (CLT) and glulam (glue laminated timber). Hear presentations from:

**Matthew Miller**, Senior Development Manager, Leandlease

**Peter Kazaglis**, Senior Project Manager, Leandlease

**Evelyn Storey**, Technical Director, Built Environment, Aurecon

Leandlease will host closing drinks following the session.



# Previous CTBUH Conferences

The Council holds a conference every year, in an active tall building city around the world. Below is a selection of proceeding covers from some of the Council's past events, spanning a history of 48 years.

## Selected Past Conferences



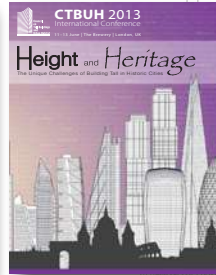
Shenzhen, Guangzhou & Hong Kong, 2016



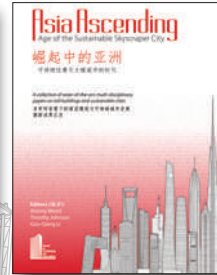
New York, 2015



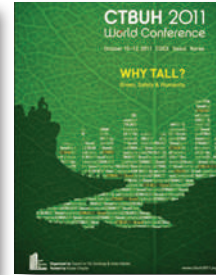
Shanghai, 2014



London, 2013



Shanghai, 2012



Seoul, 2011



Mumbai, 2010



Chicago, 2009



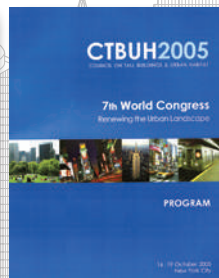
Dubai, 2008



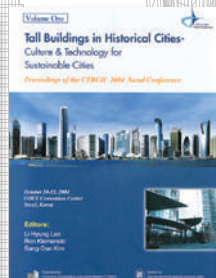
Moscow, 2008



Chicago, 2006



New York, 2005



Seoul, 2004



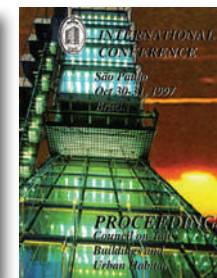
Kuala Lumpur, 2003



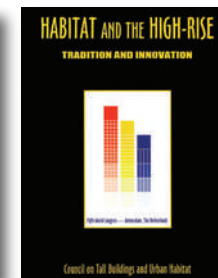
Melbourne, 2001



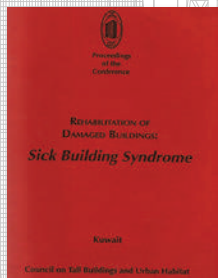
Los Angeles, 2000



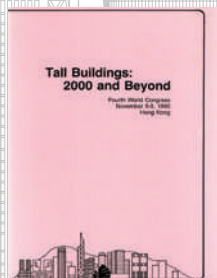
Sao Paulo, 1997



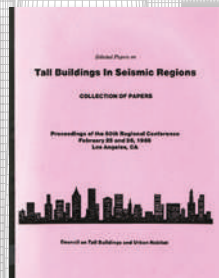
Amsterdam, 1995



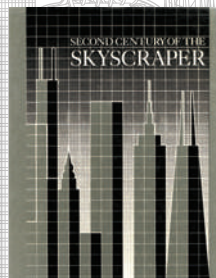
Kuwait, 1992



Hong Kong, 1990



Los Angeles, 1988



Chicago, 1986



Singapore, 1984



Paris, 1977



Hong Kong, 1976



Sydney, 1973



Bethlehem, 1972

# Conference Committees

Our great thanks goes to all committee members:

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PAPERS

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CTBUH is pleased to announce the 2018 CTBUH Journal Call for Papers. We are now accepting all types of research papers on the broad range of subjects covered within the Journal.

Find submission and formatting standards online at [www.ctbuh.org/callforpapers](http://www.ctbuh.org/callforpapers)

For general inquiries, write to Daniel Safarik, Editor, at [journal@ctbuh.org](mailto:journal@ctbuh.org)





# POLYCENTRIC CITIES

The Future of Vertical Urbanism

**CTBUH 2018**  
Middle East Conference

*Dubai & Jeddah*  
*October 2018*

## Want to see the World's Next Tallest Building under construction?

Join us at the formal launch of the 2018 Conference (Grand Ballroom, 5:20 pm) to find out more.

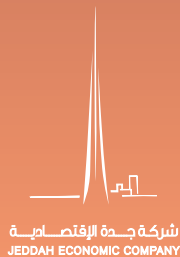
**Want to Present, Sponsor, Exhibit or Help with the 2018 event?**

Visit the CTBUH Exhibition Booth in the Grand Ballroom Lobby on the Mezzanine Level.

*Registration Opening: Tuesday 5 December, 2017*

*Deadline for Abstracts: Friday 26 January, 2018*

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[ctbuh2018.org](http://ctbuh2018.org)

## About CTBUH

The Council on Tall Buildings and Urban Habitat (CTBUH) is the world's leading resource for professionals focused on the inception, design, construction, and operation of tall buildings and future cities. Founded in 1969 and headquartered at Chicago's historic Monroe Building, the CTBUH is a not-for-profit organization with an Asia Headquarters office at Tongji University, Shanghai; a Research Office at Luav University, Venice, Italy; and an Academic Office at the Illinois Institute of Technology, Chicago. CTBUH facilitates the exchange of the latest knowledge available on tall buildings around the world through publications, research, events, working groups, web resources, and its extensive network of international representatives. The Council's research department is spearheading the investigation of the next generation of tall buildings by aiding original research on sustainability and key development issues. The Council's free database on tall buildings, The Skyscraper Center, is updated daily with detailed information, images, data, and news. The CTBUH also developed the international standards for measuring tall building height and is recognized as the arbiter for bestowing such designations as "The World's Tallest Building."

