

Centro **UC**
de Innovación
en Madera

Organizes


MADERA21
de CORMA



WCTE 2020

WORLD CONFERENCE ON TIMBER ENGINEERING
SANTIAGO, CHILE | 11 - 14 JANUARY 2021

wcte2020.com



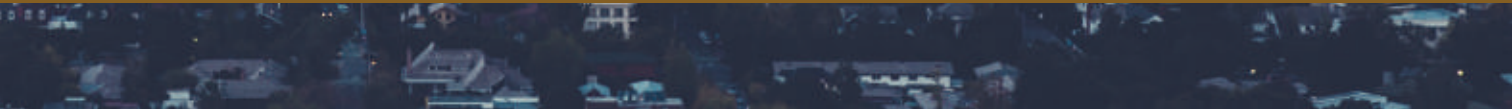
In 2020, the World Conference on Timber Engineering will be held in Latin America for the first time, specifically in Chile. The conference is organized by the UC Timber Innovation Center and Madera21 of CORMA, together with the Chilean Ministry of Housing and Bío Bio, Concepción and Austral de Chile universities. It has also received support from across the Americas, through the universities of Sao Paulo in Brazil, Washington State in the United States and Laval in Canada.

Consequently, the region will become a platform for the world to show the latest advances in timber knowledge, adding this to a global agenda that promotes a more sustainable and productive construction industry, capable of responding to the enormous challenges related to these matters.



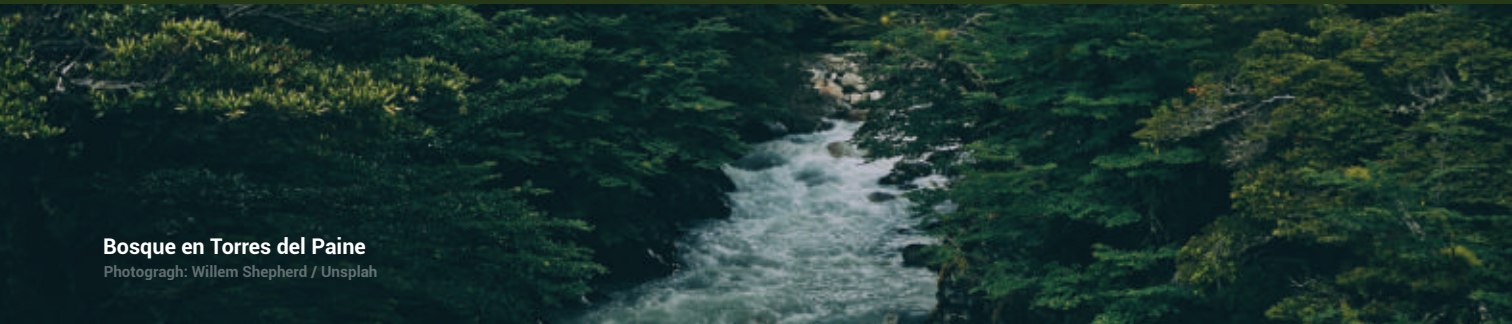
The attributes of the Chilean forestry industry; the recent development of outstanding architectural and engineering projects in wood; the well-preserved heritage of wooden ancestral works; the high rates of seismic activity and a tourist market based on the natural diversity of the country, make Chile an excellent gateway to Latin America for the scientific community and the international logging world.

The hallmark of the WCTE Santiago 2020 will be to discuss public and private international development strategies, global advances regarding regulations, new products and construction systems in wood-engineering, and how all of the above is based on the development of a sustainable forest industry in order to produce high quality wood.



Each venue of the WCTE is encouraged to include its local context when defining their topics. 2020 will be no exception, proposing as a main topic for the first time the “SUSTAINABLE PRODUCTION OF LUMBER PRODUCTS”, considering the challenges and opportunities for this sector in the construction industry and the important challenge of working in conjunction with local communities to generate a sustainable development of timber constructions.

The main topics that “WCTE 2020 – Santiago , Chile” will address, along with their corresponding subtopics, are the following:



Bosque en Torres del Paine

Photograph: Willem Shepherd / Unsplash

1. SUSTAINABLE FOREST FOR LUMBER PRODUCTION



- Stock management, Predictive growth models, Planning and Product Development
- Forestry Products Manufacturing
- Sustainable Forest Management Towards Timber Production
- Innovative Certified Forestry Products
- Particularities of native, tropical and fast growing forests
- Study case

2. WOOD PRODUCTS AND CONNECTIONS



- Grading and quality control of materials and products
- Engineered wood products
- Wood materials and composites
- Timber preservation and protection methods
- Mechanical and chemical connections
- Long-term and fatigue performance
- Study case



3. TIMBER ENGINEERING



- Codes, Practices and new Standardizations
- Fire Protection - Performance
- Advances in Seismic Design and Protection of Timber Structures
- Hybrid Structures and Tall Wooden Buildings
- Bridges, Long Spans and Special Structures
- Methods for performance-based design
- Study case

4. TIMBER ARCHITECTURE



- Intervention in building stock
- Building physics and building skins
- Integrated tools for design processes
- Retrofitting and nondestructive testing of historic buildings
- Cultural heritage of traditional wooden buildings
- Design and construction methods for durability
- Study case



Viña Pérez Cruz
Photograph: Viña Pérez Cruz

5. BUILDINGS AND ENVIRONMENT IMPACT

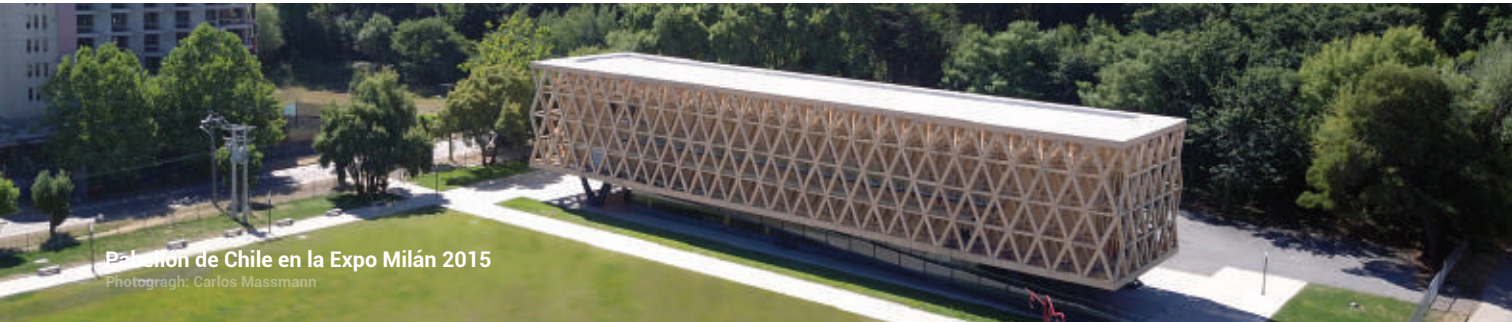


- Sustainable and residential environments in wooden buildings.
- Indoor quality, comfort and energy efficiency
- Maintenance methodologies
- Carbon footprint and LCA in timber constructions
- Passive and zero energy housing solutions
- Study case

6. POLICIES, IMPLEMENTATION AND MANAGEMENT



- Public Policies for fostering timber construction
- IT Tools (BIM) for collaborative and integrated design processes
- Operation and management of timber buildings
- Residue management for timber constructions
- Study case



Palación de Chile en la Expo Milán 2015

Photograph: Carlos Massmann

7. EDUCATION, PROMOTION AND FUTURE TRENDS



- New advances in wood science
- Industrialization of wood construction
- Environmentally responsible construction
- Education and promotion of timber construction
- Development of new professional and technical competencies
- Study case

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