

Adding value through innovation in structural design: 2 – Innovative design of timber structures

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This short paper will focus on opportunities for innovative thinking in the creation of hybrid structures and how this innovation can add value – the theme of an open forum discussion seminar led by the Institution of Structural Engineers at the 2017 IABSE Symposium in Vancouver.

During the past century, steel and concrete have dominated as primary building materials for structural designers. Timber has – for many years – remained the neglected child; when it is used, its design is often relegated to timber manufacturing firms. This paper and subsequent presentation will address emerging factors in our industry that will increase opportunities for structural designers to sensibly introduce wood into their design repertoires, often in combination with steel and concrete, to create functionally and cost-efficient structures that address the sustainability concerns of our day. Drawing on the collective wisdom of engineers who were ‘out of the box’ thinkers, it will also provide some foundational thought and stimulating discussion that assesses what it takes to become a fresh thinking engineer who considers all material combinations when designing structures.

Keywords: *hybrid structures; timber; mass timber; innovation; sustainability*

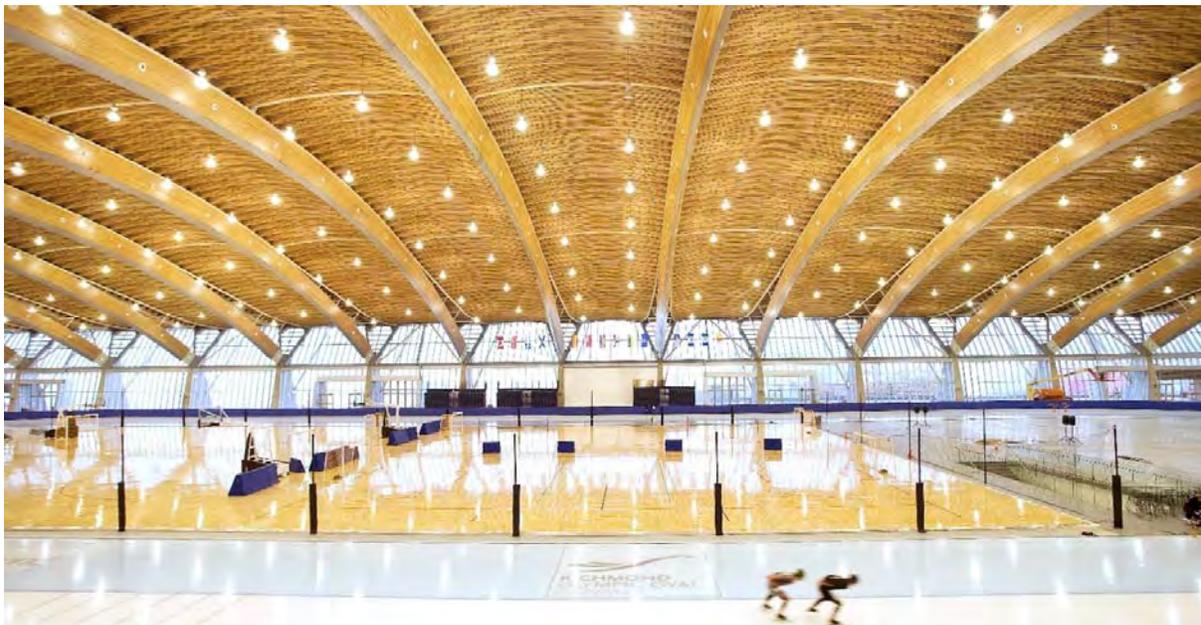


Figure 1. Richmond Olympic Oval Roof. Photo by Stephanie Tracey.