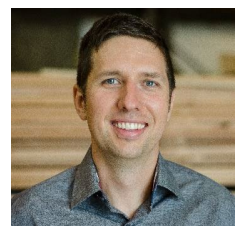


The ICCU Basketball Arena at the University of Idaho

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The ICCU Basketball Arena at the University of Idaho

The University of Idaho basketball arena models the use of timber in long-span sports facilities in North America, with the 4,000 seat facility built to home the Vandal's varsity basketball teams and to act as a gathering place for a variety of school and community events. StructureCraft joined the consultant team at concept design as the Structural Engineer of Record for the timber superstructure, taking on responsibility for both gravity and lateral load resisting systems, including seismic design.

The roof is a doubly curved plywood diaphragm supported by hybrid timber/steel trusses, carefully proportioned for both aesthetics and structural efficiency. StructureCraft's engineering team worked closely with the architect to develop, shape and optimize the curved roof for fabrication and constructability, enhancing the architectural vision, while meeting the numerous constraints and challenges associated with a doubly curved structure.

In the talk, Erik will show how StructureCraft used parametric modelling to optimize the glulam hybrid trusses and panelize the plywood roof diaphragm. Both manufacturing lead times and site duration were a major constraint, so simplification of the geometry and pre-fabrication were used extensively throughout, all while respecting the numerous aesthetic objectives of the architecture.