Embedded in the wavelike landscape of the Bundesgartenschau grounds, the BUGA Fibre Pavilion offers visitors an astounding architectural experience and a glimpse of future construction. It builds on many years of biomimetic research in architecture at the Institute for Computational Design and Construction (ICD) and the Institute for Building Structures and Structural Design (ITKE) at the University of Stuttgart.

The pavilion demonstrates how combining cutting-edge computational technologies with constructional principles found in nature enables the development of truly novel and genuinely digital building systems. The pavilion’s load-bearing structure is robotically produced from advanced fibre composites only. This globally unique structure is not only highly effective and exceptionally lightweight, but it also provides a distinctive yet authentic architectural expression and an extraordinary spatial experience.

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