

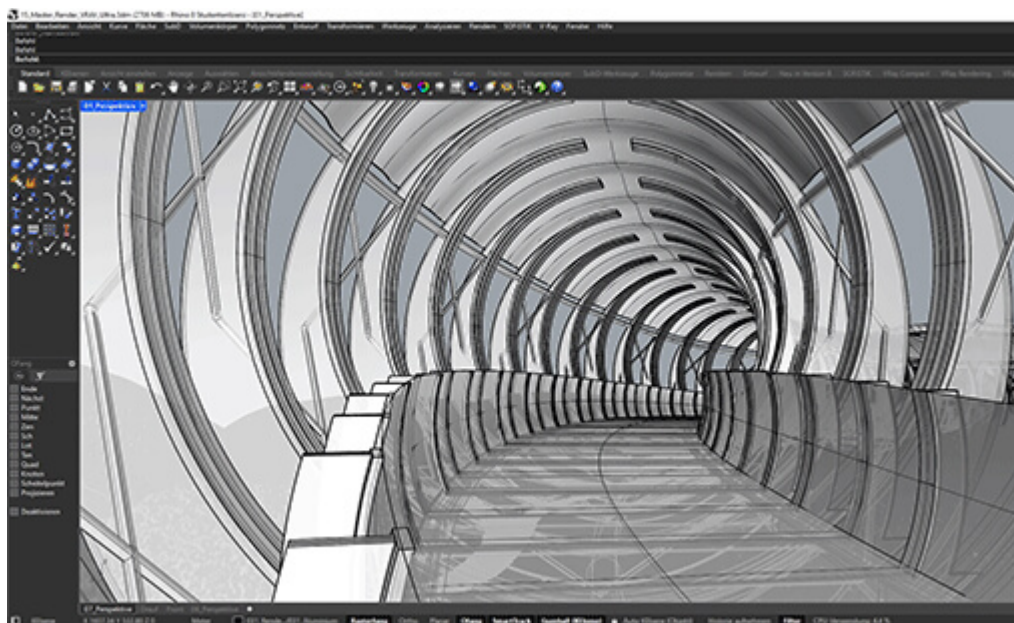
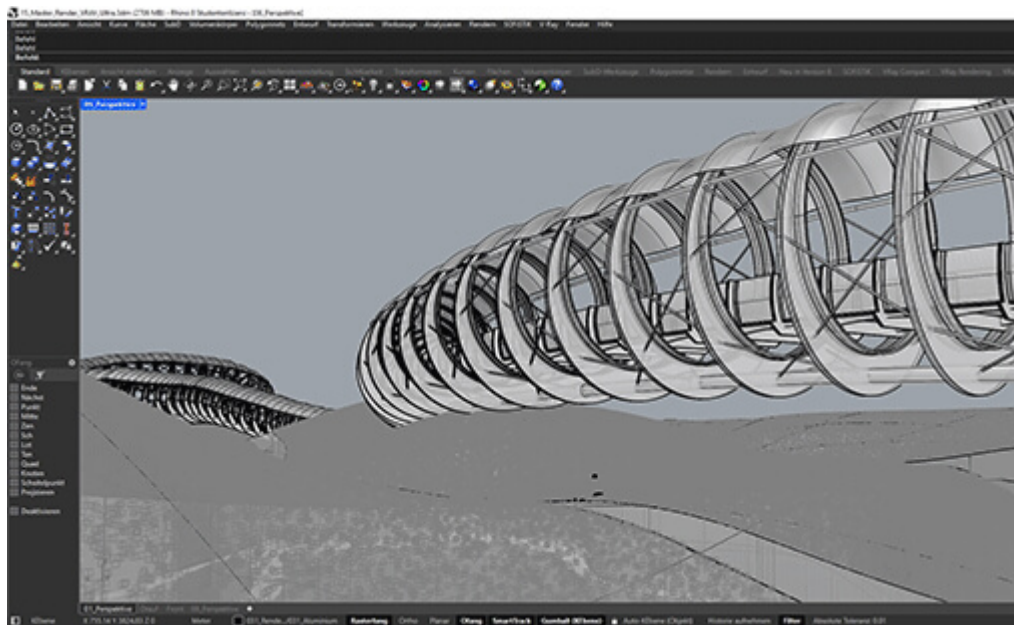
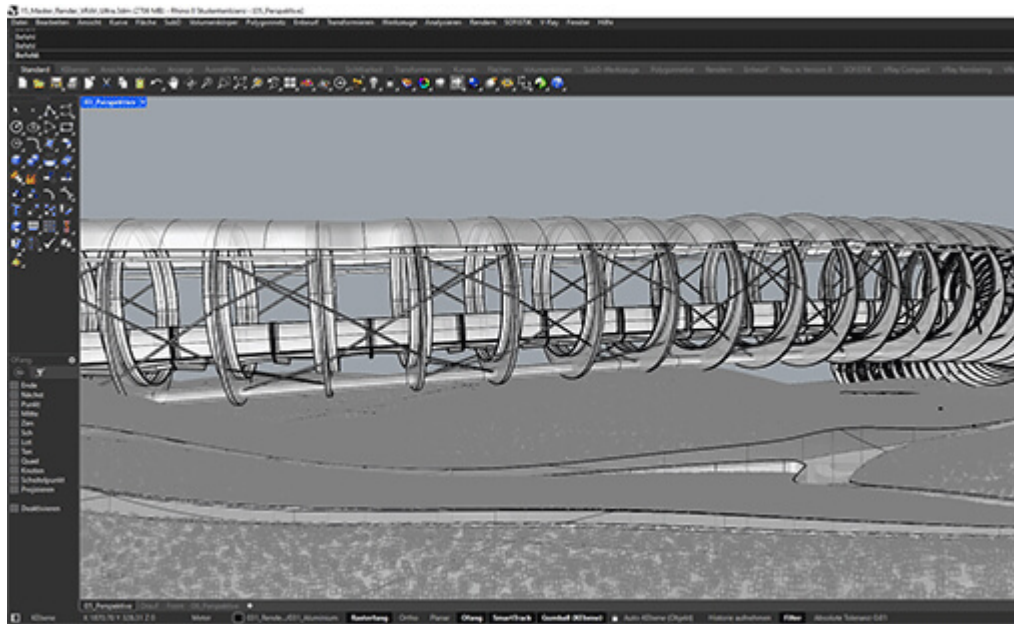
The White Snake Bridge Model

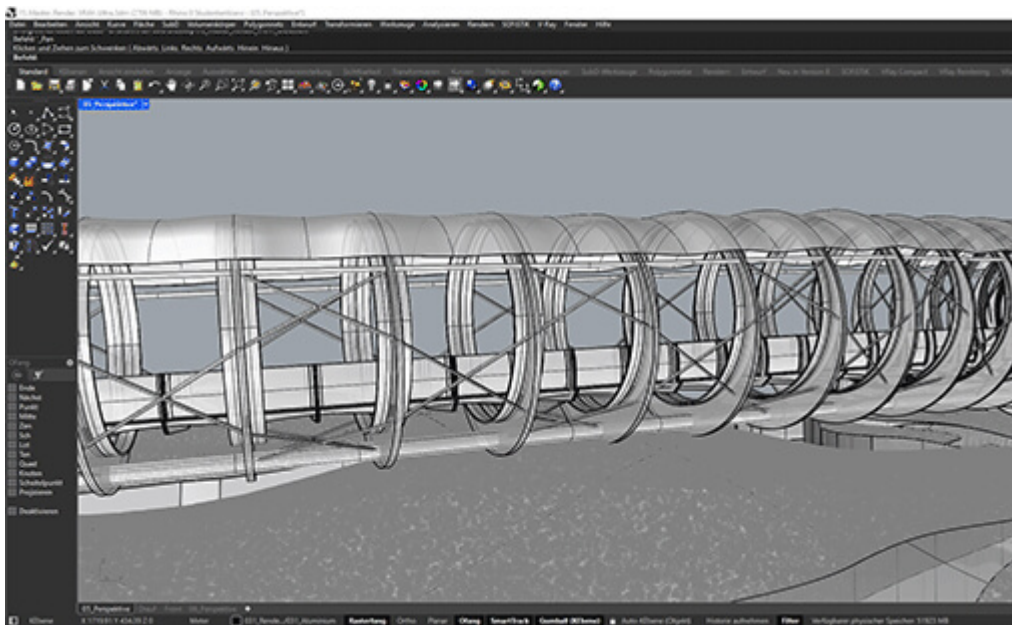
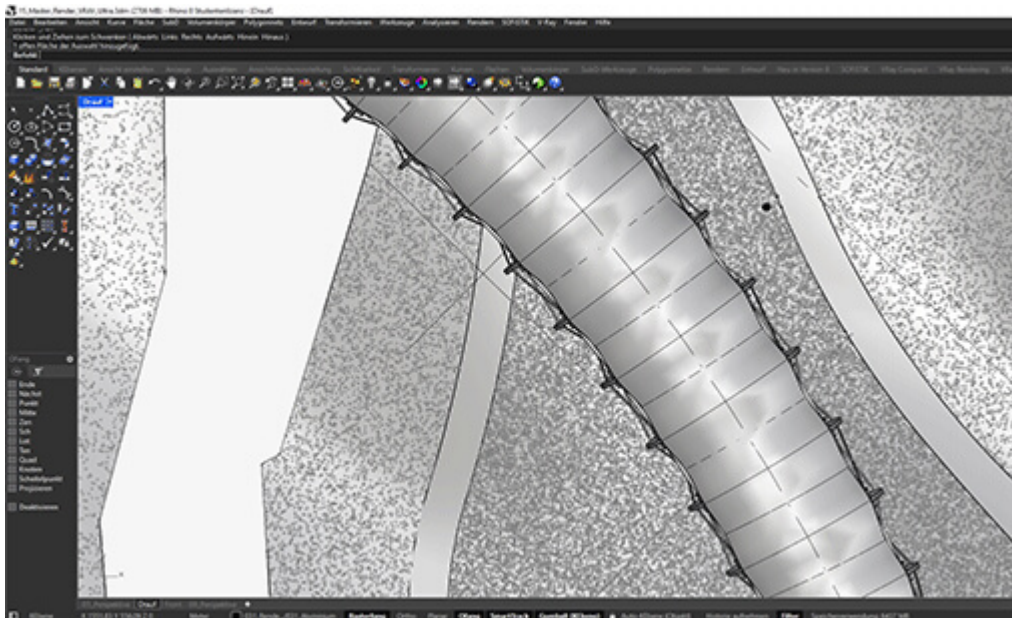
The White Snake Bridge Model, conceived by Monty Lipphardt and Benjamin Steffel as their Master thesis at the [University of Kassel](#), showcases innovative design and engineering prowess. Designed for use near Moganshan Town in China, this structural marvel draws inspiration from the sinuous form of a snake, seamlessly blending into its surroundings while providing essential connectivity within the community.



The journey from ideation to realization was marked by meticulous planning and strategic design decisions. Leveraging parametric techniques facilitated by [Rhino](#) and [Grasshopper](#), the team envisioned a loadbearing system spanning approximately 1 km. The design process involved crafting a framework that elegantly integrated with the local landscape – addressing social, natural, and commercial focal points along the riverbed.

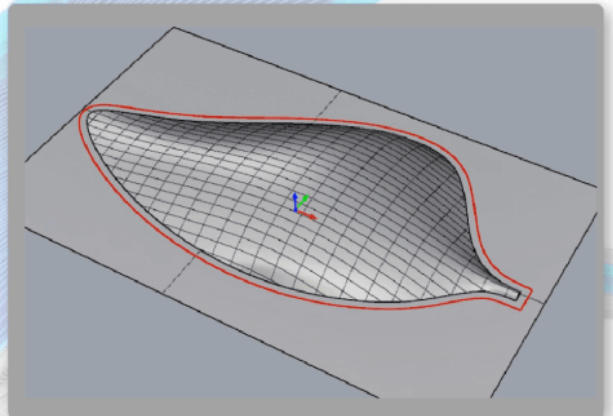
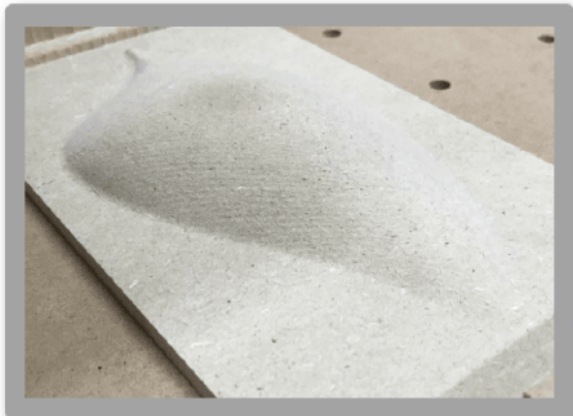
One of the project's pivotal challenges lay in simplifying the intricate design for efficient production without compromising its integrity. Through innovative approaches, such as abstracting ribs and employing [Python scripting](#), the team succeeded in streamlining the manufacturing process while maintaining structural integrity.





Additionally, using tools like [Archicad](#) and [Kiwi!3D](#) facilitated seamless integration between parametric modeling and traditional CAD software, ensuring consistency and compatibility throughout the design phase.

The production phase saw the utilization of advanced laser cutting technology to fabricate acrylic glass ribs meticulously assembled onto aluminum base beams. A meticulous approach to detail was evident in the hand-cutting and sewing of the membrane, culminating in a visually stunning and structurally sound final product.



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Ultimately, the White Snake Bridge exemplifies the harmonious convergence of innovative design methodologies, seamlessly blending parametric modeling techniques with traditional craftsmanship. As a symbol of ingenuity and collaboration, it serves as a beacon of inspiration for future architectural endeavors. sign and seamless integration of digital tools.