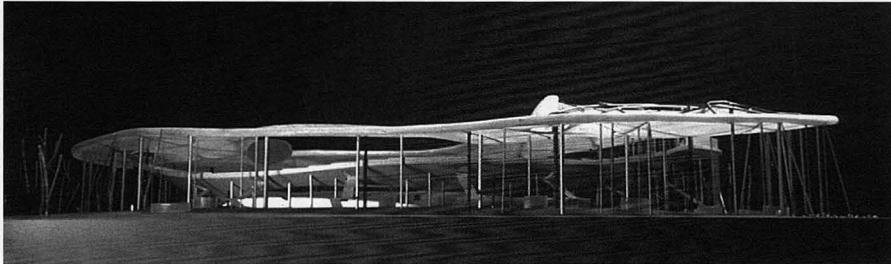


Sports Stadium Chemnitz 2002

Peter Kulka



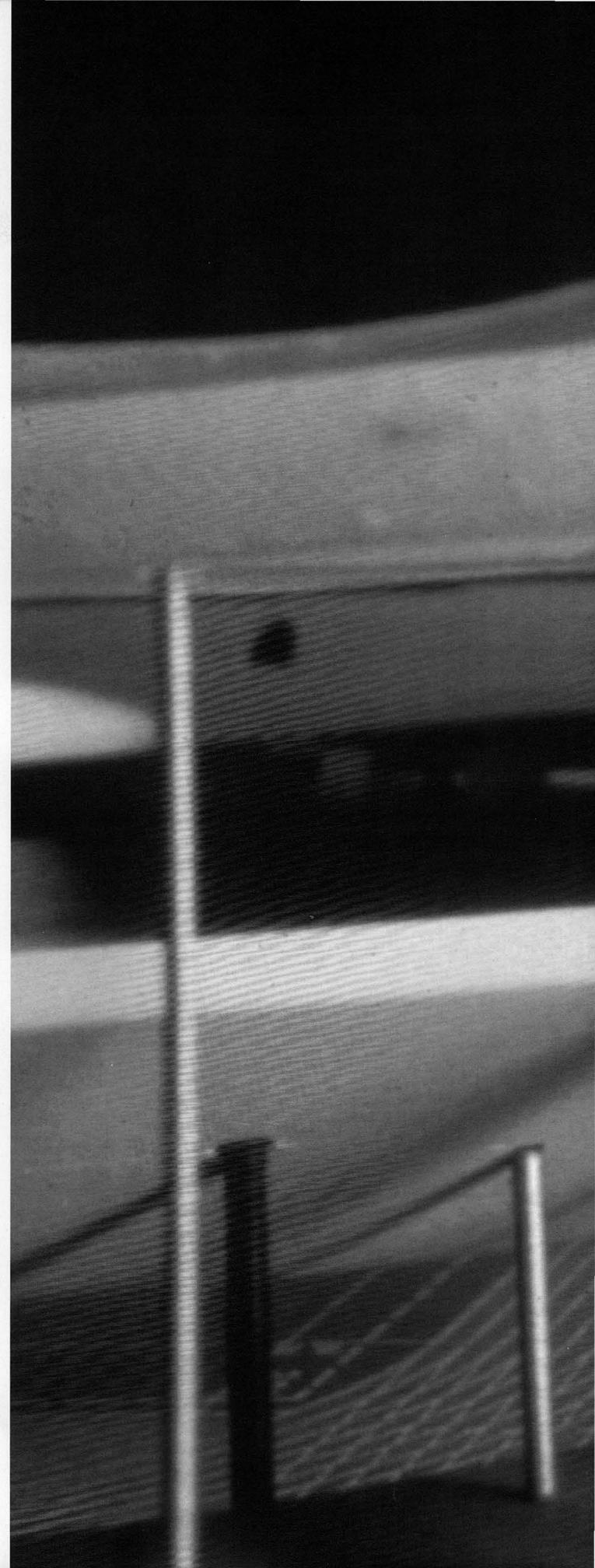
Our proposal for the Chemnitz Stadium demonstrates a vision of a light, transparent roof structure over a contoured hill-marked landscape. In between sits the Tribunal as a sculptural object. Free swinging interstitial spaces allow for a clear view of the surroundings. One is at once inside and outside. It forms no building. We are transforming space and landscapes. Architecture and construction lose their rigidity and can be rearranged on a varied formal and functional level. In turn one becomes closer to life itself. The visitor to the stadium does not walk into an impersonal and distressing wall. Instead one crosses a surrounding grove—covered as it is by a transparent, mobile roof—simultaneously part of the sky and clouds.

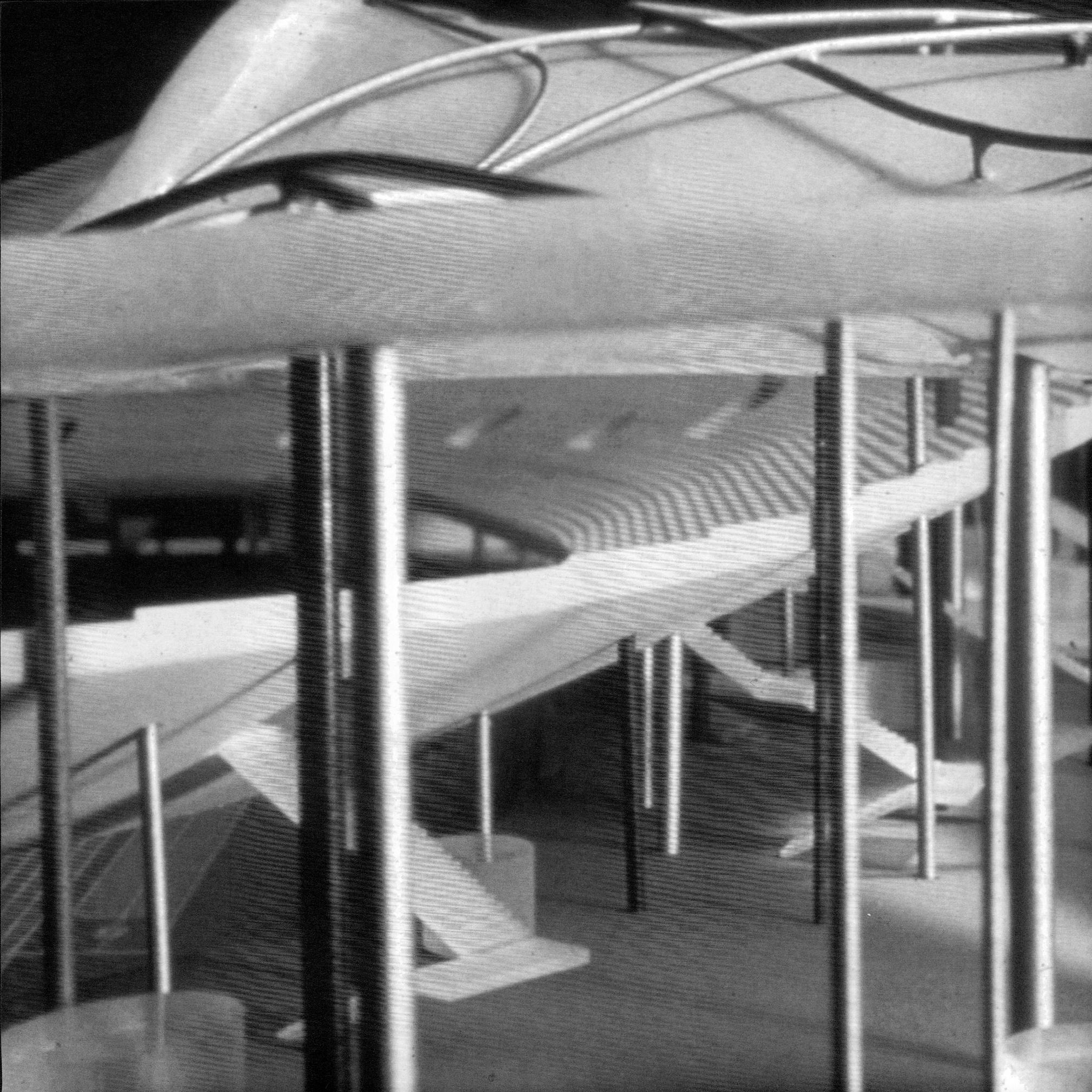
Various construction methods and materials are differentiated. Their individuality is celebrated by their position next to one another, so that the symbiosis of construction is melted. As such the stadium tower is an example and important signifier of this modeled landscape. The mobile roof and transparent (tensile) textile spans are held in place by an overhead steel construction system. The “Tribunal landscape” is itself generated as a type of earth-mound and sculptural steel and concrete ring. By sinking the playing field in relation to its surroundings the visitor is allowed a simple, self-explanatory understanding of what is taking place.

The supports of various diameter steel tubing placed in random and angled positions heighten their structural relevance where they support the Tribunal. In addition, a series of sails are placed in tension to create a visual photograph of the forces of wind.

The structural system of the roof is for the most part based on the principal of out cropping supports with diagonal torsion elements that criss-cross to develop a “free” geometry. The variation of these structural elements supports the underside of the bent and deformed roof plane. Additional cables can be placed at points of intersection to further the structural system.

As a beginning, a three-dimensional free-dynamic form was investigated in order to understand its inherent structural rigidity. It was then bent and deformed. This would





then be used consistently throughout the design as a main structural element. In an intense review process the final dimensioning, placement, and structural rigidity of each individual element was constantly refined.

Essential to this attempt is the utilization of the folded ceiling planes so that their geometry exhibits its own individual depth. This individuality can be purposefully put into place, measured and overlaid to strengthen the full impact of its enfolding. By this optimization the continuity of the geometry is brought to bear, the constructive elements are complete and refined. The roof construction is an emerging structure, the resulting form a representation of its own design process.

Indirectly over the main load system a conventional arrangement of T-braces are evenly laid out. With spaced supports of required lengths, a translucent textile membrane is hung beneath the main structure of the roof encompassing the totality of the roof geometry.

The normative frame of the second structure allows for experimental connecting elements between the membrane and "*Tragstructure*" to be possible. The overlaying main structure must resist turning and twisting forces, therefore an enclosed angled-cut system, as in post-beam constructions and/or circular tubes is used.

The Tribunal (seating) area is fashioned in a continuous deformed inclined plane. Along this plane are coffers spaced at regular intervals. This helps to complete a regulated shell-system that balances the randomness of the "*Tragsystem*" or roof structure. To achieve the necessary spans between existing supports, the depth of the shell is varied specifically to each structural element.

Our proposal shows how within an open design process, strict functional, economical, and aesthetic goals can be achieved while, simultaneously, a new and free vision of what architecture can become is developed. By that we mean: an architecture reflective of our past lives that also projects a piece of our future dreams and desires.

