Helmut Jahn Werner Sobek Matthias Schuler Architecture Engineering

#Architecture Engineering #Helmut Jahn Design #Werner Sobek Structures #Matthias Schuler Climate Engineering #Sustainable Building Innovations

Explore the synergy between architectural visionaries like Helmut Jahn, structural engineering pioneers such as Werner Sobek, and environmental design specialists like Matthias Schuler. Their collective expertise represents the cutting edge of integrating architecture and advanced engineering to create innovative, sustainable, and high-performance built environments.

Helmut Jahn

The buildings of Helmut Jahn, Werner Sobek and Matthias Schuler represent a symbiotic collaboration between architecture, engineering and building technology. This innovative team has taken up the challenge of turning optimum technical solutions into intelligent and resource-saving constructions, creating internationally acclaimed architecture of the very highest technical and aesthetical quality: "Modern buildings make the highest demands of technology. And it is not the architect who fulfils them but the engineer" (Helmut Jahn) This volume documents in detail a large number of recent projects in Europe, the USA and Asia by Jahn, Sobek and Schuler including the European Union Headquarters in Charlemagne, the Sony Centre in Berlin, office buildings for the Deutsche Post in Bonn, Shanghai International Expo Centre, Bishopsgate (London), MANN (Chicago), New Bangkok International Airport, Illinois Institute of Technology Campus Center, and Shenzhen Convention and Exhibit Center.

Helmut Jahn

Helmut Jahn's latest buildings are the result of interdisciplinary thinking taken a step further: they represent a symbiotic collaboration between architecture, engineering and building technology. The credo of this form of architecture engineering is transparency, openness and inner flexibility, and instrumental in its development are among others, Helmut Jahn, Werner Sobek and Matthias Schuler.This innovative team has taken up the challenge of turning optimum technical solutions into intelligent and resource-saving constructions, creating internationally acclaimed architecture of the very highest technical and aesthetical quality: "Modern buildings make the highest demands of technology. And it is not the architect who fulfils them but the engineer" (Helmut Jahn)This volume documents in detail a large number of recent projects in Europe, the USA and Asia by Helmut Jahn, Werner Sobek and Matthias Schuler including the European Union Headquarters in Charlemagne, Munich Airport Center, the Sony Centre in Berlin, the airport Cologne/Bonn, office buildings for the Deutsch Post in Bonn, Shanghai International Expo Centre, Bishopsgate (London), MANN (Chicago), New Bangkok International Airport, Illinois Institute of Technology Campus Center, and Shenzhen Convention and Exhibit Center.

Highlight Towers

Chicago is a city dedicated to the modern—from the skyscrapers that punctuate its skyline to the spirited style that inflects many of its dwellings and institutions, from the New Bauhaus to Hull-House. Despite this, the city has long been overlooked as a locus for modernism in the arts, its rich tradition of architecture, design, and education disregarded. Still the modern in Chicago continues to thrive, as new generations of artists incorporate its legacy into fresh visions for the future. Chicago Makes Modern boldly remaps twentieth-century modernism from our new-century perspective by asking an imperative question: How did the modern mind—deeply reflective, yet simultaneously directed—help to dramatically alter our perspectives on the world and make it new? Returning the city to its rightful position at the heart of a multidimensional movement that changed the face of the twentieth century, Chicago Makes Modern applies the missions of a brilliant group of innovators to our own time. From the radical social and artistic perspectives implemented by Jane Addams, John Dewey, and Buckminster Fuller to the avant-garde designs of László Moholy-Nagy and Mies van der Rohe, the prodigious offerings of Chicago's modern minds left an indelible legacy for future generations. Staging the city as a laboratory for some of our most heralded cultural experiments, Chicago Makes Modern reimagines the modern as a space of self-realization and social progress—where individual visions triggered profound change. Featuring contributions from an acclaimed roster of contemporary artists, critics, and scholars, this book demonstrates how and why the Windy City continues to drive the modern world.

Chicago Makes Modern

Airports today are a new building type. They have become a strange combination of transportation center and shopping mall. Like in a city the experience leads through squares, streets and rooms for transportation, commerce and private uses. At Suvarnabhumi Airport innovative and integrated architectural, structural and environmental design were used, new materials and systems of advanced technology were developed. The result is a building flooded with controlled daylight in a tropical climate. After eleven years of planning and construction the terminal was opened for passenger traffic in September 2006. Helmut Jahn is leader of the famous architectural firm Murphy / Jahn, based in Chicago. Founded over 70 years ago, Murphy / Jahn has created many notable projects in the United States and Europe, including Chicago O'Hare International Airport, United Airlines Terminal One Complex, Sony Center, Berlin and Post Tower, Bonn, German.

Suvarnabhumi Airport, Bangkok, Thailand

Publisher description

High-Performance Building

This guide sets out recommendations for every phase of the planning, construction and operation of natural ventilation systems in these buildings, including local climatic factors that need to be taken into account, how to plan for seasonal variations in weather, and the risks in adopting different implementation strategies. All of the recommendations are based on analysis of the research findings from richly-illustrated international case studies. This is the first technical guide from the Council on Tall Buildings and Urban Habitat's Tall Buildings & Sustainability Working Group looking in depth at a key element in the creation of tall buildings with a much-reduced environmental impact, while taking the industry closer to an appreciation of what constitutes a sustainable tall building, and what factors affect the sustainability threshold for tall.

Guide to Natural Ventilation in High Rise Office Buildings

This book investigates how international air terminals organize passenger movement and generate spending. It offers a new understanding of how their architecture and artworks operate visually to guide people through the space and affect their behaviour. Menno Hubregtse’s research draws upon numerous airport visits and interviews with architects and planners, as well as documents and articles that address these terminals’ development, construction, and renovations. The book establishes the main concerns of architects with respect to wayfinding strategies and analyzes how air terminal architecture, artworks, and interior design contribute to the airport’s operations. The book will be of interest to art historians, architectural historians, practising architects, urban planners, airport specialists, and geographers.

Wayfinding, Consumption, and Air Terminal Design

Glass offers a wide variety of possible applications for the realization of even the most ambitious designs in architecture, and in the past two decades it has experienced an unparalleled burst of innovation. For planners, this means working constantly with this high-performance material. In compact and appealing form, the completely revised Glass Construction Manual presents the current state of the art on planning and building with glass, from the history through the technical foundations all the way to the most innovative applications. Astonishing perspectives on thermal insulation and solar protection and the addition of thoughtfully selected new practical examples round off this comprehensive reference work.

Glass Construction Manual

The new headquarters of the Deutsche Post in Bonn successfully combines practical function, advanced technology and the well-being of its users. The aerodynamically designed high-rise building which houses the offices of the Deutsche Post is a remarkable example of the collaboration between Helmut Jahn, Werner Sobek and Matthias Schuler. This innovative design has in the meantime been honoured by the Urban Land Institute. The plan consists of two half oval towers, which are shifted slightly towards each other, enclosing a central winter garden which optimizes energy consumption. The offices can be naturally ventilated for a large part of the year with the exhaust air ventilating the winter garden. The integrated, computer-controlled heating and cooling system balances the inside and outside temperatures perfectly, and the use of innovative double skin faades make this building an example of state-of-the-art faade technology. This book portrays this structure in stunning duotone photographs, shorttexts and plans.

Helmut Jahn - Transparency

Werner Sobek is an engineer. An intelligent and gifted engineer, a specialist in lightweight structures, in using fabric where others would pour concrete, in letting glass float where others would frame it in steel. He is an architect as well. And he has worked with some of the most important architects around--Helmut Jahn, Will Alsop, Frei Otto. Werner Sobek's work unites his skill as an exceptional engineer with his talent as an architect. His vision of the built environment is about using minimal resources, being self-sufficient, enjoying daylight to the maximum, repsecting the environment. Ideas that seem formal and serious, but that translate into structures of grace and elegance, conceived at a human scale.

Contemporary Authors

Werner Blaser introduces the reader in this book to Werner Sobek's work and his professional career. He describes the research work carried out at the Institute and explains the buildings which result from a close cooperation between architects and engineers.

Architectural Record

As architectural projects have grown larger and more complex, as materials have become more specialized and advanced, as the world's cities have developed in size and density, the collaborative partnership of architects and structural engineers has gained prominence. Many of the major works of the early twenty-first century would have been difficult to build or even conceive without the contributions of firms like Ove Arup & Partners, Buro Happold, and Mutsuro Sasaki & Partners, to name just a few. Support and Resist is the first book to focus on the revolution in engineering culture in which structure shares the stage with design.In profiles of fourteen American and international engineers and more than thirty case studies, Nina Rappaport details facets of this revolution: collaboration, intuition, structural integration, hybrid structures, structure as decoration, computer workflow, and fabrication technologies.

Post Tower

Architektur des 20. Jahrhunderts Baugeschichte in Deutschland ist ein widerspruchsvolles Thema, wie die deutsche Geschichte überhaupt. Das Land hat Pioniere der Architekturmoderne, etwa Walter Gropius, Ludwig Mies von der Rohe und Erich Mendelsohn, hervorgebracht, aber sie auch ins Exil getrieben. Dekaden waren vom Streit zwischen denen geprägt, die das Neue anstrebten, und denen, die das Alte bewahren wollten und Zweifel an den Glücksversprechen der neuen Zeit hatten. Die Architektur hat die Nähe zur Macht gesucht, des Kapitals wie der Diktatur. Doch sie hat auch der

Demokratie ihre Häuser gebaut: der Weimarer Republik, der Bundesrepublik. Von diesem widersprüchlichen Gang der Dinge erzählt das Buch. Wer sich heute an eine Darstellung von über hundert Jahren Architektur wagt, vom Glanz und Elend der Kaiserzeit bis zum Pluralismus der globalisierten Gegenwart, müßte eine Enzyklopädie verfassen. Oder er muß, wie es hier geschieht, auswählen, konzentrieren, zusammenfassen, plausible Handlungsstränge finden, mit dem sprechenden Detail arbeiten. So entsteht ein spannendes Buch, das sich nicht nur an den Kenner wendet, sondern auch Leser erreicht, denen jenseits des Spezialistentums gebaute Geschichte und Gegenwart am Herzen liegen. Zugleich erleichtern umfassendes Literaturverzeichnis, Zeittabelle und biografischer Anhang die weitere Beschäftigung mit dem Thema.- Das Standardwerk: Deutsche Baugeschichte von 1900 bis heute Wolfgang Pehnt ist einer der führenden Architekturhistoriker in Deutschland Deutsche Architektur seit 1900 entsteht in enger Zusammenarbeit mit der Wüstenrot Stiftung Inhaltsverzeichnis:Vorwort der Wüstenrot Stiftung Vorwort des Autors 1900 bis 1918 Ein Jahrhundert beginnt Darmstädter Tempelkunst Fortschritt auf neuen Bahnen Villa und Landhaus Wege der Reform Zyklopenstil Modernisierung der Städte Veredelung der Arbeit 1918 bis 1933 Mangel an Obdach Wenn Hoffnungen bauen Bis in die Wolken hinauf Bauhaus und andere Wir lernen Esperanto Befreites Wohnen Weltstadt Berlin Variationen der Moderne Architektur in der Krise1933 bis 1945 Aufruf der Kulturschaffenden Germanische Tektonik NSModerne Festung Europa Architekten im Exil1945 bis 1970 Keine Stunde Null Umgang mit Ruinen Strategien des Wiederaufbaus Blick nach draußen Reise nach Moskau Happy Fifties Wettstreit der Systeme Das Seiende und das Wesende Bauen für die große Zahl Gerüste des Lebens Starke Signale1970 bis 1989 Der Mensch braucht eine andere Stadt Technische Gestalt Rückkehr in die Städte Postmoderne Spiele HochhausCity 1989 bis heute Wieder vereinigt Hauptstadt der Deutsche Import und Export Einfach oder schwierig S, M, L, XL Ökologisch Bauen Was bleibt und was sich ändertAnhang Zeittafel Kurzbiografien deutscher Architekten und Planer Literatur in Auswahl Register: Namen Orte Bildnachweis

GA Document

The third book in the series from Columbia University is focused on metals. Metals, as surface or structure as the generators of space play a role in nearly every strain of modernization in architecture. They define complete geographies of work, production, and political life. Non-architectural metals delivered in automobiles, and hard goods in the United States and worldwide have all been sourced as the engines of the sprawling late twentieth-century city in all of its forms. But in the received aspects of architectural history, metals, and in particular steel, remain less diluted; they are presented as intrinsic to the profession as material precedes concepts they are carriers of architectural meaning. Few concepts are as central in structural engineering as the ability of a material to sustain plastic deformation under tensile stress the standardization of historically known deformation limits or ductile properties in most materials allows architects and engineers to keep the analysis of structure within known parameters of finite element analysis rather then materials science. If the goal is avoid fracture, the boundaries are set and the limits of ductility are observed. Post-Ductility refers to the literal aspects of material behavior in this case of metals but also of aspects of architectural and urban space that are measured by less verifiable but nonetheless real quotients of stress and strain. It is the tension and compression of space that gives form or coherence to form. In either the case of engineering and architecture, formerly daunting degrees of risk seem to have been diminished; new levels of sophistication in calculation lower the risk tolerance for fracture, while more metaphoric readings of limits in architectural and urban space seem to have been long surpassed, at times with abandon. The counter-effort has been quite strong if not successful: there are those that want to recreate dense cities by means of compression and there are immense forces of spatial extension by way of economics, communication and transit. Space is pulled to elastic limits and made thin as highly malleable materials such as gold or lead as it is also often re-compressed as forms of urban density. If metals are a significant origin for architecture and indeed whole cities—from buildings to automobiles and labor, then what are the limits or equations that offer a new evaluation of both metals, but also of material in a wider sense, as a determining component of the built world? What does an engineer and architect bring to this arena in both local and global circumstances?

Architecture and Urbanism

Throughout the 20th century and into the 21st, the emergence of airports as gateways for their cities has turned into one of the most important architectural undertakings. Ever since the fi rst manned fl ight by the Brothers Orville and Wilbur Wright on December 17th 1903, utilitarian sheds next to landing strips on cow pastures evolved into a completely new building type over the next few decades – into

places of Modernism as envisioned by Le Corbusier and Frank Lloyd Wright (who themselves never built an airport), to eventually turn into icons of cultural identity, progress and prosperity. Many of these airports have become architectural branding devices of their respective cities, regions and countries, created by some of the most notable contemporary architects. This interdisciplinary cultural study deals with the historical formation and transformation of the architectural typology of airports under the aspect of spatial theories. This includes the shift from early spaces of transportation such as train stations, the synesthetic effect of travel and mobility and the effects of material innovations on the development, occupation and use of such spaces. The changing uses from mere utilitarian transportation spaces to ones centered on the spectacular culture of late capitalism, consumption and identity formation in a rapidly changing global culture are analyzed with examples both from architectural and philosophical points of view. The future of airport architecture and design very much looks like the original idea of the Crystal Palace and Parisian Arcades: to provide a stage for consumption, social theatre and art exhibition.

Show Me the Future

«Facade Construction Manual» provides a systematic survey of contemporary expertise in the application of new materials and energy-efficient technologies in facade design. It surveys the facade design requirements made by various types of buildings, as well as the most important materials, from natural stone through to synthetics, and documents a diversity of construction forms for a wide range of building types.

Archidea

1952/53 erbaute Mies van der Rohe die Crown Hall in Chicago: das Domizil fur Architektur, Stadt- und Regionalplanung auf dem Campus des Illinois Institute of Technology. Das Stahl- und Glasgebaude kommt ohne innere Stutzen aus, das Dach ist an vier Stahltragern aufgehangt. In der Halle - einem ganz grossen Raum mit niedrigen Wandabschlussen - sind Zeichenraum, Bibliothek und Ausstellungsraum untergebracht, im Untergeschoss die Unterrichtsraume und Werkstatten. Mies Suche nach immer klareren Strukturen gelangt in diesem Bau zur Meisterschaft. Werner Blaser, ehemaliger Mitarbeiter Mies van der Rohes, liefert eine sorgfaltige, von personlichen Erfahrungen gepragte Darstellung dieses epochemachenden Gebaudes in Text und Bild.

Ingenieur-Kunst

Situated on idyllic Taylors Island, off the coast of Maryland's Chesapeake Bay, Loblolly House inaugurates a new, more efficient way of building. Through the use of state-of-the-art building information modeling, the architects were able to streamline the design-build process. This is a manual for the componentized prefab.

American Book Publishing Record

This book is published in English for the first time. The first edition in French sold extremely well and this second edition has the added benefit of an 8 page colour section and nine new case studies not only from France but from Norway, London.

De Architect

Edited by Susanne Anna.

Support and Resist

This book deals with the aesthetic potentials of sustainable architecture and its practice. In contrast to the mechanistic model, the book attempts to open a new area of scholarship and debate on sustainability in the design and production of architecture. It traces and underscores how the consideration of environment and sustainability is directly connected to aesthetic propositions in architecture.

Deutsche Architektur seit 1900

Flat glass opens up more possibilities for the planner than virtually any other material. Because of the technological complexity of using it, however, no specific structural forms have been developed for glass supporting frameworks as they have been for wood, concrete, and steel. This book is thus the

first to present a coherent guide to the planning and design of glass supporting frameworks. The focus is on the pressure-resistant, flat supporting element as a basic building block for broad supporting structures. The spatial and constructive forms of multifunctional, self-supporting glass envelopes are vividly illustrated and systematically explained. The constructions presented exhibit new aesthetic qualities, based not on the dictum of "dematerialization" but on the poetry of gleaming and transparent planes. They ring in a new chapter in the history of glass architecture.

State Street Village

This books comprises various themes around imaginary facades and building envelopes. Aspects such as function integration, networking of elements, new structures and materials, as well as the addition of functions to existing structures are investigated in around 85 examples.

Forthcoming Books

International Bibliography of Book Reviews of Scholarly Literature Chiefly in the Fields of Arts and Humanities and the Social Sciences