DESCRIPTION

Today the convergence of design, engineering and architectural technologies are breeding a new material practice in experimental architecture. In this pioneering publication, this important shift is fully defined as a highly dynamic synthesis of emerging principles of spatial, structural and material ordering integrated through the application of materialization and fabrication technologies. Providing the foundations for a new theory of structuring in architecture, The New Structuralism has broad implications for the way we both conceive and undertake architectural design, as its impact starts to emanate not only across education internationally, but also through architectural research and practice.

Features premier research and design-oriented engineering practices:
Bollinger + Grohmann
Buro Happold
Hanif Kara (AKT)
Werner Sobek

Focuses on design and fabrication technologies in the recent work of:
Martin Bechthold
Barkow Leibinger
EMBT (Enric Miralles, Benedetta Tagliabue)
In the development of the field of design studies, one of the important areas of emerging knowledge has been the evolution of research, theories and experimental models related to processes of design. **Rivka Oxman** was one of the first researchers to explore the relationship between design thinking and computational models of design. For several decades she has been among the core body of international design researchers. In recognition of her contributions through research and publication to the understanding of architectural knowledge in models of design thinking and the role of knowledge in design education, she has been appointed a Fellow of the Design Research Society.

In recent years her work has attempted to reorient design thinking research to experimental models of digital design thinking. She has formulated novel information models of digital design such as generative and performance-based design. In defining and formulating these models in her research and writings, she has explored experimental pedagogy in architectural education as a medium to promote research-oriented design. Since 2006 she has been leading an experimental digital design studio at the Technion Israel Institute of Technology. She is an architect, researcher, author and educator. For the past four years she has been the Vice Dean of the Faculty of Architecture and Town Planning at the Technion. A prominent member of the international research community in design, she is also Associate Editor of Design Studies and a member of the editorial board of leading international journals. Current interests are the exploration of adaptive generative mechanisms of architectural and structural morphology and their ability to be responsive to changing environmental conditions.
The merging of theory and praxis in architecture and design has become an important influence upon current design. New vectors of theoretical activity, particularly in recent decades, have come to play an important role in emerging design practices. **Robert Oxman** is an architect, educator, writer and researcher in the field of architectural and design histories and theories. He was educated at Harvard College and the Harvard Graduate School of Design where he studied with Josep Lluís Sert and Fumihiko Maki. He is Professor and Dean Emeritus at the Technion and is currently Professor of Architectural and Design History and Theories at Shenkar College of Engineering and Design in Tel Aviv. At Shenkar, he is Dean of Graduate Studies and engaged in developing a unique programme of graduate education which integrates design, technology and industry.

Oxman has held the chairs of Design Methods and CAAD at the Technical University Eindhoven in the Netherlands. His work in architectural and design history and theories since 1945 has been published internationally. He is currently involved in researching and writing in three fields. The first, on design concepts, involves the evolution of architectural and design theories and practices after Modernism. This work also addresses the emergence of architectural and design research during this period. The second, undertaken in collaboration with Rivka Oxman, is the definition of the impact of digital design upon emerging theories and design practices. Currently entitled *The Digital in Design: Theory and Design in the Digital Age*, it is scheduled for publication by Taylor & Francis in 2011. The third area, involving architectural and design knowledge, relates to the role of knowledge in design, education and research, and particularly the significance of universal knowledge in a digital age.