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Biomimetics of Motion: Nature-Inspired Parameters and Schemes for Kinetic Design

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Abstrak

This book provides readers with a timely guide to the application of biomimetic principles in architecture and engineering design, and describes various aspects of motion in living systems. Geometric, mechanical and rhythmic parameters are listed and illustrated using examples from flora and fauna, and contextualized within an integrated mapping of biomechanical combinations that have proved their success in the course of evolution. For designers, the schemes identify those aspects that have a high probability of being efficiently combined, paving the way for new solutions and offering a method of evolutionary problem solving. The book guides readers through the field of nature-inspired design, offering an extraordinary resource for professional architects, engineers and designers, as well as for researchers and students. Throughout the book, natural evolution is approached as a powerful resource that can enrich architecture and design by providing innovative, optimal and sustainable solutions.