



History of the Modern Suspension Bridge

Solving the Dilemma between
Economy and Stiffness

Tadaki Kawada

Translated by Harukazu Ohashi

Edited by Richard Scott

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Preface to the English Edition

JAPAN, FROM HUMBLE FORAYS INTO THE FIELD IN THE 1950s, today stands as a leading builder of suspension bridges. Its engineers have taken tremendous strides over the past four decades, brilliantly adapting contemporary practice emerging out of the ashes of the 1940 collapse of the Tacoma Narrows Bridge, and devising new methods of analysis, design, construction, and maintenance. For more than a decade the longest suspension bridge in the world—the Akashi Kaikyo Bridge—has stood as dramatic testimony to this remarkable progress, as have many other large suspension bridges built in this island nation.

No small figure in this transformation has been Dr. Tadaki Kawada. Dr. Kawada's long association with suspension bridges—as an academic, practicing engineer, and head of a large bridge construction firm—has brought him into intimate contact with the theory, history, design, and building of large suspension bridges. His association with the massive Honshu-Shikoku project, which alone involved 10 suspension bridges, has occupied much of his working life. This experience has brought profound knowledge, deep understanding, and a unique perspective to the story that unfolds over the pages that follow—a story of suspension bridges, the largest, most dramatic, and graceful of bridge forms.