With *Active Control of Structures*, two global pioneers present the state-of-the-art in the theory, design and application of active vibration control. As the demand for high performance structural systems increases, so will the demand for information and innovation in structural vibration control; this book provides an effective treatise of the subject that will meet this requirement. The authors introduce active vibration control through the use of smart materials and structures, semi-active control devices and a variety of feedback options; they then discuss topics including methods and devices in civil structures, modal analysis, active control of high-rise buildings and bridge towers, active tendon control of cable structures, and active and semi-active isolation in mechanical structures.

*Active Control of Structures*:

- Discusses new types of vibration control methods and devices, including the newly developed reduced-order physical modelling method for structural control;

- Introduces triple high-rise buildings connected by active control bridges as devised by Professor Seto;

- Offers a design strategy from modelling to controller design for flexible structures;

- Makes prolific use of practical examples and figures to describe the topics and technology in an intelligible manner.
ABOUT THE AUTHOR

Andre Preumont was born in 1951. He obtained his PhD from the University of Liege (Belgium) in 1981 while he was working in earthquake engineering at Belgonucleaire. In 1985-6, he was visiting professor in the Aerospace and Ocean Engineering department at Virginia Tech (USA). He was appointed to the chair of Mechanical Engineering and Robotics of ULB (Universite Libre de Bruxelles) in 1987. He created the Active Structures Laboratory in 1995. He is also part-time professor at the University of Liege. He is the author of several books on active vibration control and random vibration. His current research interests are in mechatronics, active vibration control, adaptive optics and precision engineering. He has had visiting positions at UTC, Compiegne and INSA-Lyon (France).

Kazuto Seto was born in 1938. He graduated from a doctoral course in Engineering at Tokyo Metropolitan University in 1971 and received a Dr. Eng. degree from Tokyo Metropolitan University in the Same Year. He worked as an associate professor and professor in the Department of Mechanical Engineering, National Defense Academy from 1973 until 1993. From 1993, he worked as a professor in the Department of Mechanical Engineering, Nihon University. He retired in 2007 and is now president of Seto-Vibration Control Laboratory. He retired in 2007 and is now president of Society of Mechanical Engineers (JSME) and a fellow of IE Australia. He was given JSME Awards for his research in 1984 and 1989, and the Dynamics, Measurement and Control Award from JSME in 1994 and 1996. His research interests in the areas of structural vibration control, system modeling and identification, motion and vibration control for multistructural systems with multi-controlled modes.

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