

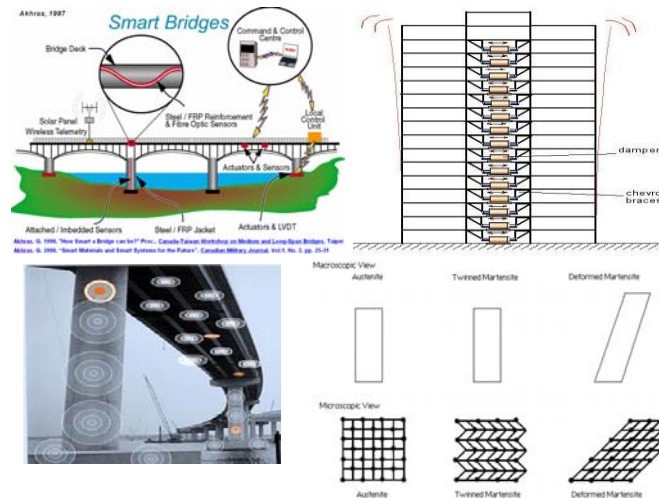


Monday, April 30, 2012 (2:30-3:30 pm)
834 Mudd

SMART STRUCTURES: ENGINEERING AN INNOVATIVE TECHNOLOGY

Prof. Paolo Gaudenzi

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While smart structures are already a mature technology, they offer the opportunity of novel applications in a variety of engineering disciplines. This seminar will cover the state of the art in this research field, and will go into detail for the discipline. The basic principles underlying the physics of active materials will be presented, along with mathematical models and simulation tools (mostly finite element techniques) used by engineers. The seminar will present results obtained within projects conducted with the European Space Agency in the field of smart structures (e.g. referring to electro-active polymers), along with recent results in the area of active fluid/structure interaction and in the field of wireless structural sensing.



Biosketch: Paolo Gaudenzi earned his PhD in Aerospace Engineering at the University of Rome on 1989. In 1990 he joined the School of Aerospace Engineering of La Sapienza as assistant professor. He was a visiting scientist at MIT during 1991-92. In those years he was involved in the development of finite element procedures for piezoelectric continua and in research concerning space application of the smart structures technology. He is now full professor of Aerospace Structures and Systems at the Faculty of Engineering of the University of Roma La Sapienza, Director of the Professional Master in Satellite Systems and Coordinator for PhD studies in Aerospace Technology. He is author of numerous publications in the field of finite element modeling of composite laminates, piezoelectric materials and active materials and structures. More recently he was involved in system and cost engineering for space systems.