



THE LOU SILANO LECTURE

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Department of Civil Engineering and Engineering Mechanics
Columbia University

THE LIMIT OF STRUCTURE *The Tower of Babel Question*

Mr. Matthys Levy
Chairman Emeritus, Weidlinger Associates

May 3, 2011 (3:00-4:00 pm)
Davis Auditorium

Ever since the late nineteenth century, structures have been built higher and bridges have spanned further. In 1939 when I arrived in the United States, New York could boast having the world's tallest skyscraper, the Empire State Building, and San Francisco the world's longest suspension bridge, the Golden Gate Bridge. After the Second World War, these records would soon tumble as longer and taller structures would be planned and built until here we are in the twenty-first century with Dubai's Burj Khalifa tower scraping the clouds at 828 m high and the Stretto di Messina Bridge jumping 5070 m across the strait separating Sicily with the Italian mainland. Have we reached too high and too far in our quest for sheer size? Have we reached the technological limit of how high we can build or how far we can span? What about Frank Lloyd Wright's mile high tower and the tempting Strait of Gibraltar waiting to join Europe to Africa. I propose to explore the limits that technology presents us in this quest and whether there are socio-economic constraints that may outweigh mere physical limits.

Matthys P. Levy is a founding Principal and Chairman Emeritus of Weidlinger Associates, Consulting Engineers. Born in Switzerland and a graduate of the City College of New York, Mr. Levy received his MS and CE degrees from Columbia University. He has been an adjunct professor at Columbia University and a Distinguished Professor at Pratt Institute and a lecturer at universities throughout the world.

Mr. Levy is the recipient of many awards including the ASCE Innovation in Civil Engineering Award, the Egleston medal from Columbia University, the Townsend Harris medal from City College, the IASS Tsuboi Award, the ENR Medal of Excellence, three Lincoln Arc Welding awards, three PCI awards, the Founder's Award of the Salvadori Center and an AIA Institute Award. He was named a Structural Engineering Legend in Design by Structural Engineering Magazine in 2003. He has published numerous papers in the field of structures, computer analysis, aesthetics and building systems design, has illustrated two books and is the co-author of the best selling book, *Why Buildings Fall Down* as well as, *Structural Design in Architecture*, *Why the Earth Quakes*, *Earthquakes*, *Volcanoes & Tsunamis*, *Earthquake Games* and *Engineering the City*. His recent book, *Why the Wind Blows, a history of weather and global warming*, was published in 2007.

Levy is a member of the National Academy of Engineering, a Fellow of the Institution of Civil Engineers and the American Society of Civil Engineers, a member of the International Association of Shell & Spatial Structures, the International Association of Bridge and Structural Engineers and other professional societies. He is a registered Professional Engineer in the US and Eur Ing in Europe; he is also a founding director of the Salvadori Center that serves youngsters by teaching mathematics and science through motivating hands-on learning about the built environment.



Mr. Lou Silano
Civil Engineering 1951, 1955

Past Speakers

Dr. Man-Chung Tang, T.Y. Lin International (2010)
Dr. Lawrence C. Bank, University of Wisconsin-Madison (2008)
Mr. Michael J. Abrahams, Parsons Brinckerhoff, Inc. (2008)