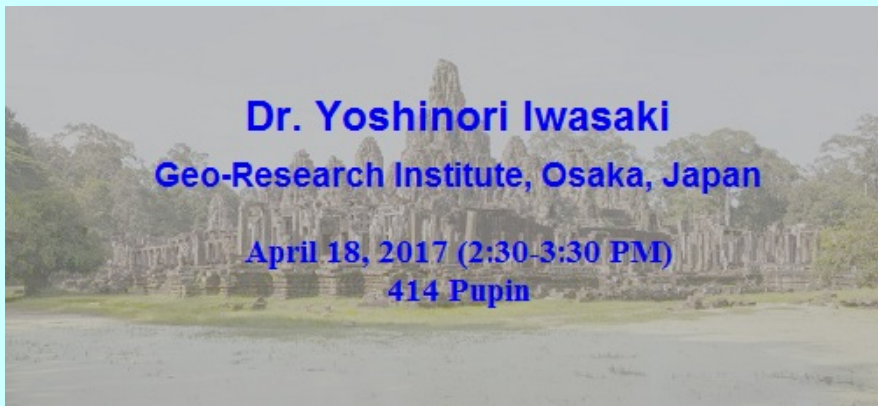




**The Donald M. Burmister Lecture**  
Department of Civil Engineering and Engineering Mechanics  
Columbia University

**Authenticity of Cultural Heritage  
and  
Preservation of Main Tower of Bayon Temple (Angkor, Cambodia)**



**Abstract:** The Japanese Government has established a team for safeguarding Angkor in 1994. The geotechnical and foundation studies of the main tower of Bayon site will be presented in this Lecture. The main tower is made of masonry stone structure of 31 m in height that had been built on a man-made sandy mound of 14 m in thickness. A direct foundation was selected in Angkor and it has been standing for more than 600 years. Beneath the main tower, there is a vertical shaft in the foundation without lining and only backfilled with loose sand. The stability of the tower comes from the unsaturated compacted soil mound. The character defining elements are discussed for authenticity and stability of the foundation of the Bayon monuments.

**About The Speaker:** Dr. Yoshinori Iwasaki is a world-renowned seismologist and geotechnical researcher. He is the Head of Geotechnical Group for the preservation of Angkor as a member of Japanese Government Team for safeguarding Angkor since its establishment in 1994. He is the Chairman for ATC19 Technical Committee on Geo-Engineering for Conservation of Cultural Heritage and Historical Sites in Asia, International Society of Soil Mechanics and Geotechnical Engineering. He has also been member of UNESCO projects on world cultural heritage in countries such as Indonesia, Afghanistan, China, and Iran. Dr. Iwasaki holds a B.S. (Geophysics) and Ph.D. (Civil Engineering) from Kyoto University, M.S. (Geotechnical) from UC Berkeley and Ph.D. (Geotechnical) from Karagandy State Industrial University, Kazakhstan. He is holding academic positions as Professor in Cyber University (Japan) and Eurasian National University (Kazakhstan), while acting as Executive Director for Geo-Research Institute.



The late Prof. Donald M. Burmister (1895-1981) is one of the pioneers in the field of Soil Mechanics and Geotechnical Engineering. He established the Soils Laboratory at Columbia University in 1933. He was a faculty member for 34 years before retiring in 1963. During his tenure at Columbia University, he investigated earthworks and foundations for over 400 projects. Most notably among these were the Brookhaven National Laboratory, the Throgs Neck, Tappan Zee and Verrazano Narrows Bridges, the First New York World Fairs at Flushing Meadows, and the reconstruction of the White House in 1950. He has developed several soil testing methods and his soil classification system is still widely used. He also contributed to the first use of digital computer in conjunction with his theory of the layered pavement system.