Universal equivalent static wind load for long-span structures

**Abstract**

This lecture first demonstrates the meaning and the necessity of the Equivalent Static Wind Load (ESWL). The theoretical back ground of the Universal ESWL which can reproduce the maximum (and minimum) internal forces in all necessary members is also discussed, and the derivation method of the Universal ESWL is introduced. The internal forces reproduced by the ESWLs due to the Gust Loading Factor (GLF) method and the Load-Response Correlation (LRC) are compared with those by the Universal ESWL. Then, some advantages of the Universal ESWL are demonstrated with some examples.