

# Wind Loading on Tall Buildings

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## ABSTRACT

*Simple quasi-static treatment of wind loading, which is universally applied to design of typical low to medium-rise structures, can be unacceptably conservative for design of very tall buildings. On the other hand such simple treatment can easily lead to erroneous results and under-estimations. More importantly such a simplified treatment for deriving lateral loads does not address key design issues including dynamic response (effects of resonance, acceleration, damping, structural stiffness), interference from other structures, wind directionality, and cross wind response, which are all important factors in wind design of tall buildings. This paper provides an outline of advanced levels of wind design, in the context of the Australian Wind Code, and illustrates the exceptional benefits it offers over simplified approaches. Wind tunnel testing, which has the potential benefits of further refinement in deriving design wind loading and its effects on tall buildings, is also emphasized.*

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