5.1 Summary

Several methods have been developed and used for evaluating the along wind induced loads on tall buildings (refer to Chapter3). This research project introduced the use of numerical simulation models using CFD techniques to investigate the along wind induced loads (forces and moments) taking into consideration the dynamic interaction between the gusting of wind and the motion of building. A comparative study was carried out to verify the adequacy of the developed numerical model by comparing the numerical results with the data measured in wind tunnel test and values evaluated by four international building codes and standards.

This thesis presented parametric studies using 112 study cases to investigate the effect of each parameter in wind environment and building properties on percent of difference (P.O.D.) between numerical model and ASCE7-2005 evaluated base shear and overturning moment.