

A study of Köppen-Geiger system for comfort temperature prediction in Melbourne city

Abstract

Weather and climate affect human and several aspects of the planet Earth. The Köppen-Geiger system is widely used for describing and analysing thermal comfort according to climate. However, little is available about the Köppen's system in predicting and evaluating the comfort temperature. This investigation addressed some observed issues in using the Köppen-Geiger system for thermal comfort studies. The origin data of the present case study is from the RP-884 database. The selected location is Melbourne city. The climate of Melbourne city was categorised (**Cfb**). The subjects of the case study were mostly exposed to dry environment. Long-term projections showed that the climate will shift from (**Cfb**) to (**Cfa**). Despite the wide range of the indoor air temperature, the shift from neutrality to slightly cool or slightly warm was very narrow. Major issues of Köppen's system in evaluating neutral temperatures according to climate types in Melbourne city were also addressed. The use of GIS for future thermal comfort meta-analysis was recommended.