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Adaptive Thermal Comfort Model for Air-Conditioned Lecture Halls in Malaysia

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Abstract : This paper presents an adaptive thermal comfort model study in the tropical country of Malaysia. A number of researchers have been interested in applying the adaptive thermal comfort model to different climates throughout the world, but so far no study has been performed in Malaysia. For the use as a thermal comfort model, which better applies to hot and humid climates, the adaptive thermal comfort model was developed as part of this research by using the collected results from a large field study in six lecture halls with 178 students. The relationship between the operative temperature and behavioral adaptations was determined. In the developed adaptive model, the acceptable indoor neutral temperatures lay within the range of 23.9-26.0 oC, with outdoor temperatures ranging between 27.0–34.6oC. The most comfortable temperature for students in the lecture hall was 25.7 oC.

Keywords : hot and humid, lecture halls, neutral temperature, adaptive thermal comfort model
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