

## **Classroom Comfort Ability Assessment: A Case Study**

### *Abstract*

*This study was conducted to evaluate the comfort level of an air-conditioned classroom at the School of Manufacturing Engineering campus using objective measurement, subjective assessment and Computational Fluid Dynamics (CFD) modeling. CFD software namely FLUENT was used to simulate the comfort parameter such as temperature and air velocity. Corroboration between results from objective measurement, subjective assessment and CFD modeling was conducted. The results obtained showed that measured temperature and relative humidity were within the standard comfort condition by ISO EN7730 (1994) while air velocity exceeded the standard limit by ISO EN7730 (1994). The overall comfort vote, Predicted Mean Vote (PMV) and Predicted Percentage Dissatisfied (PPD) indices shows that occupants are comfortable and satisfied with the classroom comfort level. In addition, some recommendations were made to improve the comfort level and also to reduce carbon dioxide (CO<sub>2</sub>) concentration built up in the classroom.*