

学术报告

室内环境质量与工效学进展：室内空气品质和热环境如何影响工作和学习效率

Short course on IEQ and performance: How indoor air quality and thermal environment affect work and learning

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Abstract

Indoor environments should safeguard and enhance occupant's health, comfort, and productivity, as people spend around 90% of their lives indoors. Indoor environmental quality (IEQ) is more important for the performance of office workers than job satisfaction and job stress. Occupants who experience even subclinical symptoms such as headache and fatigue because of poor IEQ are less likely to be comfortable and also less likely to be productive. IEQ influences human performance; a performance increase of as much as 10% or more can be expected following improvements of the indoor environment. Indoor air quality (IAQ) and thermal environment are two important indoor environmental factors that affect health and human performance. Quantitative estimates of the effects of IAQ or thermal environment in non-industrial indoor environments on work and learning is important. Also, exploring the potential mechanism of this phenomenon should be emphasized. As researchers in the effects of IAQ and thermal environment on performance, we are often asked to give our best estimate of how, and to what extent, performance is affected by different aspects of indoor climate.

Short Bio of Professor Pawel Wargocki

Assoc. Prof. Pawel Wargocki graduated from Warsaw University of Technology. He received his PhD from the Technical University of Denmark, where he has been teaching and performing research ever since. He has more than 25 years of experience in research on human requirements in indoor environments. He is best known for his seminal work demonstrating that poor indoor environmental quality affects performance of office work and learning. Other work influenced requirements for ventilation and air cleaning. Recent research includes studies on emissions from humans, on sleep quality and on performance of green buildings, as well as gas-phase air cleaning and air quality in aircrafts. He has collaborated with leading research institutions, universities, and industrial partners around the world such as National University of Singapore, Jiaotong University in Shanghai, Syracuse Center of Excellence, United Technologies and Google. He was President and long-standing board member of the International Society of Indoor Air Quality and Climate (ISIAQ), Vice President of Indoor Air 2008, and Chair of ASHRAE committees. Presently he is a Secretary of the Academy of Indoor Air Sciences. He has received several awards for his work including Rockwool Award for Young Researchers, ASHRAE Ralph Nevins Award, Environmental Health Award and Distinguished Service Award, ISIAQ's Yaglou Award and Best Paper Awards in Indoor Air. Published extensively.



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