

Professorships - Dr. Andy Persily from NIST, USA

During his visit to DTU, Dr. Persily will work with colleagues at DTU to investigate protocols for ventilation assessment in buildings, i.e., strategies and methods to verify that a building's ventilation systems is operating as intended and in compliance with applicable standards and building regulations.

This effort is motivated by both the COVID-19 pandemic and the new emphasis on indoor air quality in the EBPD, which stress the need for reliable ventilation of buildings and the verification that such ventilation is actually occurring. These verification protocols need to be both practical and affordable and address the wide range of building and ventilation system types that exist in Europe and the world at large.

Dr. Persily has been studying ventilation assessment in buildings for more than four decades and is currently working on this topic as part of his research at NIST. It is important to recognize that ventilation approaches in the U.S. are often very different from those in Denmark, but the concepts and tools he has developed and continues to study are very likely to translate.

His work at DTU will allow him to learn more about Danish buildings and ventilation systems, which are among the more advanced in the world and likely reflect the future of ventilation in the U.S. and elsewhere. As part of this effort, Dr. Persily will focus on the role of indoor CO₂ measurements in evaluating building ventilation, which he has been studying for more than thirty years. He has been working more recently on CO₂-based ventilation assessment methods; this collaborative visit will allow him to interact with researchers at DTU on the applicability of these methods and ways that they can be improved.