

## Propositions

accompanying the doctoral dissertation:

### *Healthy air for children: Strategies for ventilation and air cleaning to control infectious respiratory particles in school classrooms*

by Er Ding

1. While COVID-19 is no longer a serious threat to our daily lives, continued collaborative efforts in relevant research need to continue for better preparedness of future pandemics.
2. Not all designers are engineers, but all engineers are designers: they design to make artifacts with desired properties and change existing situations into preferred ones.
3. A smart building with a new environmental and climate design is not more comfortable and sustainable than a traditional one if it is too complicated for the occupants to utilize its smartness.
4. One of the biggest challenges preventing indoor environmental quality (IEQ) researchers from involving children in their studies – despite children being the primary stakeholders – is the difficulty of obtaining ethical approval.
5. The design paradigms for school ventilation should be shifted from comfort-based to health-based. [*This proposition pertains to this dissertation*]
6. Existing ventilation regimes in schools are outdated and ineffective in preventing the transmission of infectious respiratory particles (IRPs). [*This proposition pertains to this dissertation*]
7. Personalized air cleaners should become a mandatory feature in classroom design. [*This proposition pertains to this dissertation*]
8. Optimizing one aspect of indoor environmental quality (IEQ), such as indoor air quality (IAQ), often conflicts with another aspect, such as acoustics, making comprehensive solutions elusive. [*This proposition pertains to this dissertation*]
9. Having your father as a senior professor in the same field can be incredibly “annoying”, but it is a hidden superpower you should cherish.
10. Pursuing a PhD deepens one’s resonance with Robert Frost’s poem *The Road Not Taken*, especially the closing line – “I took the one less travelled by, / And that has made all the difference”.

These propositions are regarded as opposable and defensible, and have been approved as such by the promotor Prof.dr.ir. P.M. Bluyssen and co-promotor Dr. C. García-Sánchez.