

**Urban Climate at Street Scale
Analysis and Adaptation**

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Propositions

accompanying the dissertation

Urban climate at street scale: analysis and adaptation

by Patrick Schrijvers

1. Absorbed longwave radiation (both from the sky and from trapping) is the main contribution to the building's surface energy budget during the nighttime (this thesis, Chapter 2).
2. During daytime, solar radiation is the main contribution to the urban heat island and exceeds the radiation absorbed compared to a flat terrain due to multiple reflections from building facades (this thesis, Chapter 3).
3. Increasing the albedo inside the urban canyon decreases air temperature, while the apparent temperature increases, which might not be the desired result (this Thesis, Chapter 4).
4. The Urban Heat Island phenomenon is not the governing factor for human health, the urban climate inside the city is.
5. The results of a numerical study on the urban climate are very sensitive to the imposed boundary conditions and processes that are taken into account.
6. As long as people do not adapt their behaviour during heat waves, technical measures to reduce the urban air temperature remain a mere drop in the ocean.
7. Improving numerical tools can only continue as long as there are sufficiently detailed measurements to validate the numerical model.
8. It is more useful to combine people with the same research methodology in one office than people with same research topic.
9. Performing a PhD is more about motivation and perseverance and less about intelligence.
10. Streaming music services are practical, but can never replace the look, sound and feel of old-fashioned vinyl.

These propositions are regarded as opposable and defendable, and have been approved as such by the supervisors prof. dr. H.J.J. Jonker, prof. dr. Ir S. Kenjereš and Dr. S.R. de Roode