Propositions accompanying the thesis:
"Studying Dark Matter using Weak Gravitational Lensing: from Galaxies to the Cosmic Web"

1. Feedback from Active Galactic Nuclei is very important to accurately predict the properties of galaxy groups in cosmological simulations. (Chapter 2)

2. There is no observational evidence which suggests that galaxies or dark matter halos are directly affected by their cosmic web environment. (Chapter 3)

3. While the redshift evolution of troughs (projected cosmic underdensities) is undetectable with current lensing measurements, it could be detected using surveys that probe higher redshifts such as Euclid and LSST. (Chapter 4)

4. Assuming that the gravitational lensing mechanism and the background cosmology behave as predicted by ΛCDM, Verlinde's theory of Emergent Gravity gives a good, parameter-free description of the weak gravitational lensing profile around isolated galaxies. (Chapter 5)

5. The combination of the complete spectroscopic GAMA survey with the deep and accurate KiDS weak lensing survey provides unique and state-of-the-art observations of the dark matter distribution around galaxies and galaxy groups.

6. On the scales of the cosmic web, the total (dark + baryonic) matter distribution follows that of the galaxy number density.

7. In order to study underdensities in the large-scale matter distribution using current weak lensing surveys, one should study projected underdensities (such as troughs) rather than 3-dimensional voids.

8. The fact that the predictions from Emergent Gravity are currently limited to spherically symmetric, static and isolated mass distributions, greatly inhibits its applicability to cosmological observations and simulations.

9. It is very difficult, but important, to prevent getting too emotionally involved in a problem so complex, fundamental, long-standing and polarizing as the dark matter problem.

10. In the ideal world, educating the public on scientific topics would be an integrated and valued part of every scientist's profession, instead of an unpaid extra-curricular activity.

11. Both the efficiency and diversity of the institute could be improved by simply changing the sign on the excess number of one-person men's bathrooms into gender neutral ones.

12. The last proposition of Yvette Welling's thesis will be false.

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